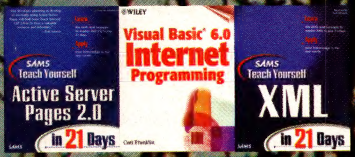
$3.95*

PC Update

July 1999
Volume 16, Issue 6



Reviews

Books

Internet/Intranet

Design Shop Gold

Sharp Actius A150

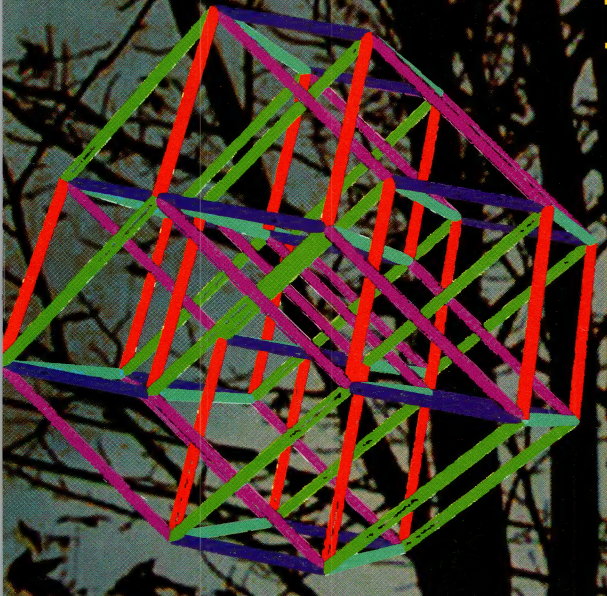
Features

The hypercube: Exploring the fourth dimension, and further

Recovering from hard drive failure

Evolution of e-commerce

Melissa virus FAQ



MELBOURNE PC USER GROUP

ISSN 1031–8208
Print Post Approved
320258/0008
Circulation 11,500

MELB PC USER GROUP

PC Update

July 199
Volume 16, Issue
ISSN 1031-820

PC Update directory

Editorial committee

Managing Editor
Ash Nallawalla
man-editor@melbpc.org.au

Reviews Editor
Ash Nallawalla
rev-editor@melbpc.org.au

Production Manager
Peter Smith B/AH: 9876 2871
Kedosa Pty Ltd Fax: 9879 9035
Mob: 0418 344 553
prod-mgr@melbpc.org.au
Mail to PO Box 786
Ringwood VIC 3134

Review material
Mark "Attn: The Reviews Editor" and forward to the Group's address.

Advertising Agent
The Fingerprint Group Pty Ltd
290 Auburn Road
Hawthorn 3122 Ph: 9819 4411
Fax: 9819 5511
Peter Jackson
Mob: 0411 871 296
fprint@enternet.com.au

Printer
Offset Alpine Printing
Ph: 9821 4199

Distribution
Gordon & Gotch Limited

Publisher
Melbourne PC User Group Inc
(A0003292V)
27 Dorcas Street
South Melbourne VIC 3205

* Recommended price

Member of
Association of Personal Computer User Groups
APCUG

Features

10 Over-clocking Celeron CPUs
George Skarbek

12 Seeing the Basics:
VB 6.0 and Internet programming
Tony Stevenson

18 The Melissa virus
Carnegie Mellon University

20 QBASIC and the "Figure it Out" puzzle—Part 1
Keith Phillips

22 How to set up Cardfiles in Win 9x
Bruce Carson

23 Virus alert

23 Portable computers — maintaining security
Georg Adem

28 Recovering from hard drive failure
Brian K Lewis, PhD

42 Nothing to do with biscuits:
Understanding Web "cookies"
Jonathan Eaton

43 Using Java to implement client-server databases
John Grant, Xiaoya Lin and Noel Craske

52 Evolution of e-commerce
Deshani Rodrigo

55 The Internet, present and future
Steve Morgan

57 Backing up Internet Dialler settings
George Skarbek

58 The hypercube:
Exploring the fourth dimension, and further
Ken Holmes

62 Peter's *PC Update* puzzles
Peter Smith

Advertisers!

THE FINGERPRINT *f* GROUP PTY LTD

Your message will be read by well over 20,000 business and home PC users. We have a wide range of sizes from business card to full page or spreads in monochrome, and full process colour.

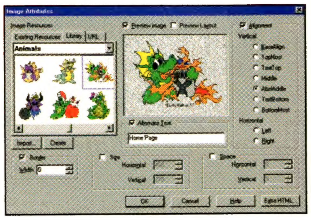
For bookings, rates and deadlines, contact Peter Jackson
The Fingerprint Group Pty Ltd
Ph: (03) 9819 4411
Fax: (03) 9819 5511
290 Auburn Rd
Hawthorn 3122

Typesetting Available!

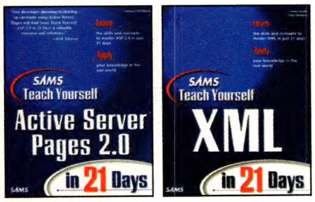
PC Update Deadlines

1999	Articles	Ad bookings unset/set	Ad delivery	Magazine delivered by
August	5 Jul	5 / 9 Jul	9 Jul	30 Jul
September	2 Aug	2 / 6 Aug	6 Aug	27 Aug
October	6 Sep	8 Sep	10	Sep

Reviews

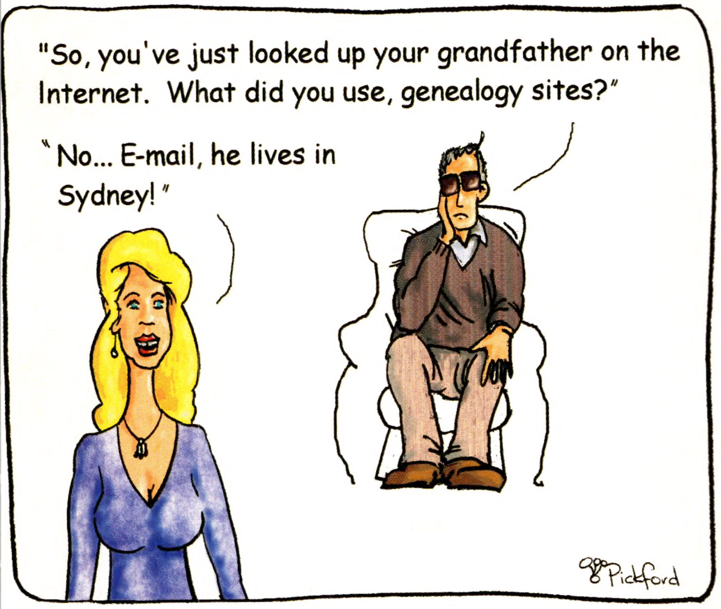


6 Internet/Intranet Design Shop Gold 4.2
Bernadette Houghton



14 SAMS Teach Yourself—in 21 Days
Tony Stevenson

16 Sharp Actius A150 Ultra Light Notebook
John Oswald


"So, you've just looked up your grandfather on the Internet. What did you use, genealogy sites?"
"No... E-mail, he lives in Sydney!"
Pickford

Melb PC News

Mailer
Dial Help
4 Editorial *Ash Nallawalla*
9 Free daytime internet classes for the retired and unemployed
17 Volunteers' corner *Jean D'Andrea*
30 Why not join Melb PC?
31 Membership and other forms
33 Internet access application form
35 Discounts for members
36 Special interest group meetings
37 SIG meeting reports
46 *Melb PC Surveys* *Ash Nallawalla*
49 Members' free ads
50 Training courses
56 Letter to the Editor
61 Random access *John Swale*
63 *PC Update* advertisers index
63 Monthly meeting details
63 Acknowledgments

Melb PC directory

Office, membership, deliveries

27 Dorcas Street
South Melbourne VIC 3205
(9 am – 5 pm) **9699 6222**
Fax: **9699 6499**
PO Box 283
South Melbourne VIC 3205
Australia

Staff *office@melbpc.org.au*
Tricia Swan
Margaret Greer
Kerry Williams

First Aid (Help) line
(10 am – 3 pm) **9696 9200**

Management committee

committee@melbpc.org.au

President
Morris Tobias 9682 3122 BH
president@melbpc.org.au

Vice-President
Colin Lovitt 9654 0484 AH
vice-president@melbpc.org.au

Treasurer
Bill Ford *treasurer@melbpc.org.au*

Secretary
John Swale *secretary@melbpc.org.au*

Members
Dave Botherway *daveb@melbpc.org.au*
Carol Daniels *cad@melbpc.org.au*
Joe Henry *joehenry@melbpc.org.au*
Brian Horman *brianh@melbpc.org.au*
Thom Lyons *tomlyons@melbpc.org.au*
Barry Martin *barrymar@melbpc.org.au*
Ash Nallawalla *ash@melbpc.org.au*
George Skarbek
gskarbek@melbpc.org.au

Online Services

Melb PC BBS
(16 lines, up to 28.8 kbps)
9699 6611

Internet Service
64 lines, up to 120 mins total, per day, max 33.6 kbps **9686 4506**
60 lines, up to 120 mins total, per day, max 56 kbps (V.90) **8626 5000**
120 lines, up to 120 mins total, per day, max 56 kbps (K56flex)
9934 9400

Intranet Service
26 lines, 30/10 mins, extra if lines free, max 33.6 kbps **9690 5644**

Home Page
http://www.melbpc.org.au

Copyright notice

Copyright © 1999, Melbourne PC User Group Inc and individual authors. Except where otherwise stated, all material is the copyright of the author. Material in this magazine may be copied by nonprofit PC user groups without fee provided that there is no restriction published with the article, the copies are not used for commercial advantage, and the origins of the material and this permission to copy are acknowledged in the reprinted item.

Liability disclaimer

Material published in this magazine represents the opinions of the authors, and does not carry any endorsement by the committee or the editor. We do not test programs or tips that are published here, so use them at your own risk. Problems or follow-up queries should be sent to the original author. Melbourne PC User Group Inc. has no official connection with any public or commercial organisation and does not provide product recommendations. Names of commercial products mentioned in this magazine are registered names or trademarks of their owners.

Contributions

All authors must lodge a completed submission form (included in the style guide) that confirms that the article is previously unpublished (if previously published, the author must have the right to authorise republishing), and original, save for any content which is properly credited, and that Melbourne PC User Group Incorporated may publish the article on one or more occasions on paper, the Internet or otherwise, edit the artide and/or permit republication by non-profit organisations. These are *PC Update's* standard terms of publication.

Before starting a review or article, write to the editor, in case someone else has beaten you to it. Then download, read and follow the style guide STYLAUTH.ZIP from area PCU.351 of the BBS. Note, anonymous submissions are not accepted.

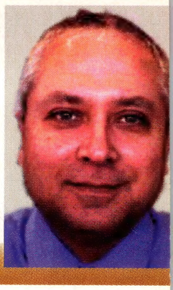
Authors must present a balanced view of the subject matter, based on a reasonable period of use—if the article is overly critical they should submit a copy to the distributor or manufacturer for comment. Copies of such correspondence should accompany the submission.

Submitting articles and reports

Upload articles, reports and reviews to the BBS, as plain, unformatted (ASCII) text files or plain unformatted (ASCII) text files bundled in a ZIP file with accompanying graphics. Do not use long file names or upload self-extracting EXE files. Make sure you are in the PCUP file area, before you upload the file. Leave a message to All (not "Private") in the *PC Update* Discussion area. Submissions that conform to the above formatting requirements can also be sent by post, on a virus-free diskette, which will not be returned, to the Group's PO Box, or e-mailed, with attachments of less than 1 MB, to *pcupdate@melbpc.org.au*.
Editing. All articles are edited for style, spelling, grammar and length. Articles that may not be edited or that do not meet our standards, will be rejected.
Graphics. Supply graphics or screen shots, wherever possible, as colour, or black and white images, saved in one of the formats: TIF, BMP, PCX, WMF or EPS.
Rejections. Contact the editor if your submission is not published within four issues. Articles with long file names, self-extracting files or virus infections are rejected without notification. Other rejections are advised by phone or in writing.

EDITORIAL

Ash Nallawalla



In this issue you will see an article by Jean D'Andrea, our Volunteer Co-ordinator. Jean has been active in Melb PC for some years, notably with the bulletin board system (BBS) and has now come forth to help the Group grow into its next phase.

Volunteering in Melb PC can be very rewarding or frustrating, depending on the individual and area of interest. I have been fortunate to have been on several committees and subcommittees for the past 12 years and have led a special interest group (SIG). I am still active in the international user group body, the Association of Personal Computer User Groups.

Themes for 1999

We would like to present a theme each month but that requires writers who are willing to cover the following topics. Please submit your proposal to *man-editor@melbpc.org.au*.

August

What's new and Just for fun

September

Internet, Connectivity and Computer Telephony

October

Controlling your computer, Graphics, Imaging, Printing, and Multimedia.

November

Getting down to business

December

Portable and Remote Computing

Surveys

I'd like to thank the 900 or so members who have completed the online *PC Update* survey (see URL at the bottom of this page) and about 200 who completed the shorter Membership and ISP surveys. That leaves about 10,000 others who should visit those surveys and click away. It is in your own interest, fair dinkum.

The ongoing survey feedback is very interesting and valuable, even the anonymous barbs left by some. Here's one from a chap who isn't planning to renew after ten years of membership, reproduced here unedited: *"With some exceptions the committee are rude, self-serving (trips overseas) and seem to have lost sight of the aim of the group dispite verbal utterances to the contrary. [An unkind allegation against unspecified trainers is omitted here.] Whatever the group really want. You will not find out from such a badly designed survey as this. And anyway the group needs inspired leadership. The useby date seems to have passed. Any marketeer will tell you that you are on the declining curve of the product life cycle and yet there are more users than ever before!!"* If this chappy thinks he knows the "aim" of the Group, it isn't what it was ten years ago. Wait for the published results.

Some people are annoyed or bored by the bickering in the newsgroups. Others find these editorials condescending, tedious and verbose. Although such individuals are in the minority, their uninformed remarks are detrimental to volunteerism. The unkindest cuts come from fellow volunteers who succumb to the rumour mill and our past Presidents seem to be their favourite targets. There are many members out there who can do a better job, but if they do not come forth to help, their skills are lost to the Group. They should contact Jean.

Our 1996 survey cost us about $7000, as it involved using an external bureau. It raised 630 replies. I'm happy to report that the current surveys cost the Group nothing but my time, some space in the magazine and some postage

Office 2000 released

Office 2000 (see June issue) was released on 10 June. The top-of-the-line Premium version retails for $699 (upgrade price) and there is a $50 cash-back offer until 30 September.

July meeting—Microsoft

Please mark 7 July in your diaries for the monthly meeting (see page 63) starting at 6.00 pm. One of our presenters is Microsoft, who will showcase the new Office 2000 package. The speakers will be Penelope Lewin and Des Jacobsen.

This presentation will cover the features and benefits of Office 2000. You will hear about technologies such as the Windows installer and self-repairing applications. Microsoft will highlight how Office 2000 turns the Intranet into a workgroup platform, where users can publish documents directly and collaborate online.

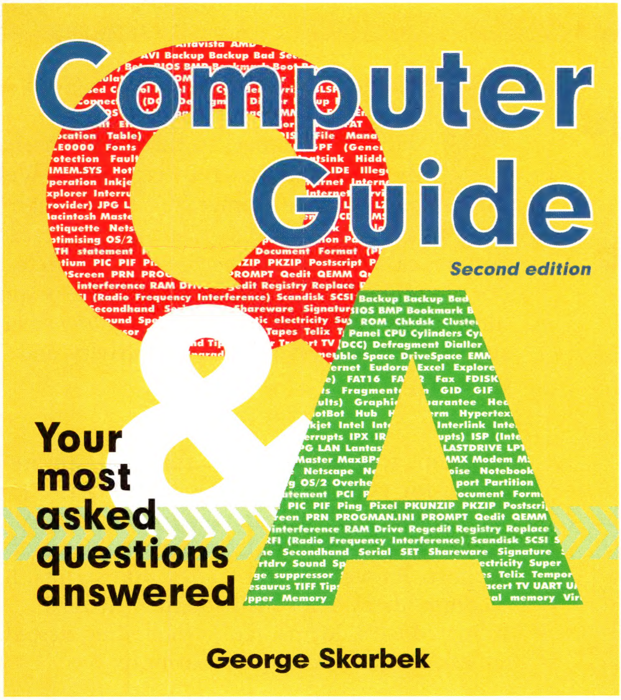
Every PC is different

In my day job I get to visit many offices where my employer is undertaking field trials. It never fails to surprise me that every PC is different, even within the same office. People install software as a trial and sometimes wonder why their PCs seem to get slower. Some of that software may well be running in the background and taking up valuable memory and resources.

Current Melb PC Surveys:

http://www.melbpc.org.au/surveys/

Your most asked questions answered



George Skarbek, voted favourite author by *PC Update* readers in 1997, has written a second edition of his book *Computer Guide — Your most asked question answered.*

This book is based on material published in the weekly “Q&A” column in the computer section of *The Age*, *The Sydney Morning Herald*, *The West Australian* and *The Courier Mail*. Also included are comprehensive articles originally written for Melb PC’s award winning magazine, *PC Update.*

The questions and answers have been collated into 19 chapters and many answers have been considerably expanded. This edition has been extensively updated since the publication of the first edition in 1996. Numerous cross-references simplify searching, and several extensively researched articles are included.

Even if this book fixes only one nagging problem, it will have been worth buying

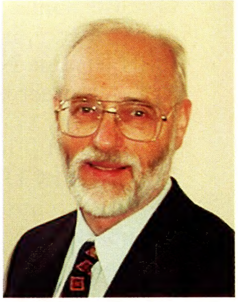
Members’ Price

$25 **RRP $29.95**

Also available on diskette in Word 6/97 format for just $8 (plus $2 p&h)

MELB PC USER GROUP

Over 100 hints and tips have been added in this edition, as well as over 50 screen dumps



This book is aimed at everyone interested in personal computing, from beginners to experienced users, covering such broad fields as:

- Hints, tips and problem solving
- Clear and simple explanations on optimising computer performance, freeing up disk space and memory improvement
- How to recover from viruses and accidental deletion of critical system files which would normally prevent your computer from starting
- Help in getting the most out of the Internet
- Guide to upgrading computers
- Types of computers, printers and modems to buy.

Pick up from Melb PC, 27 Dorcas Street, South Melbourne.
Or send the details below with a cheque, money order or credit card details for $30 per book (includes $5 p&h) or $10 per diskette (includes $2 p&h) to:
Melb PC, PO Box 283, South Melbourne VIC 3205

Please send me George Skarbek’s *Computer Guide*

Name .... Memb no ....

Delivery Address ....

....

Visa ☐ / MasterCard ☐ / Bankcard ☐ / Cheque/M.O. ☐

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

Expires __ / __ .... books @ $30 per copy $..........

Word 6 ☐ / Word 97 ☐ .... diskettes @ $10 each $..........

Signature ....

SOFTWARE REVIEW

Internet/Intranet Design Shop Gold 4.2

Bernadette Houghton

Info Box

Internet/Intranet Design Shop Gold 4.2

Minimum system

- 486 processor
- Windows 95 or Windows NT
- 16 MB RAM
- CD-ROM drive
- 50–150 MB free hard disk space, depending on options installed.

Availability / cost

Purchase online at *www.bomerangsoftware.com*; currently there is no Australian reseller.

RRP: US$139.95

> **whiz-bang features such as automatic navigation bars, frames and database connections are surprisingly easy to use**

Internet/Intranet Design Shop Gold (IIDS) is a Web authoring program which will appeal to those who prefer the visual approach to laying out Web pages. While primarily a Web design program, IIDS also enables you to create cards, posters, calendars and other graphic projects. For a so-called entry-level program, it has some surprisingly advanced features, including Java and CGI scripting, database connectivity and frame support.

IIDS ships with 60 templates that you can use as a basis for your own designs. It supports HTML 3.2 and 4.0, and you can add your own HTML code if you need a feature which IIDS doesn't support. As well as Java applets and scripts, IIDS accommodates embedded sound, videos or animated GIFs, forms, tables (including nested tables), artistic text and much more.

IIDS comes with a hefty collection of supporting software, including Microsoft Internet Explorer, Netscape Navigator, SecurePay WebShop (an e-commerce program), Apache Server (Web server), MGI Photo Editor, GIF Animator and CPIC Multimedia Thumbnail Cataloguer. A second CD contains 45,000 animations, sound, music clips, photos and videos that you can insert into your projects.

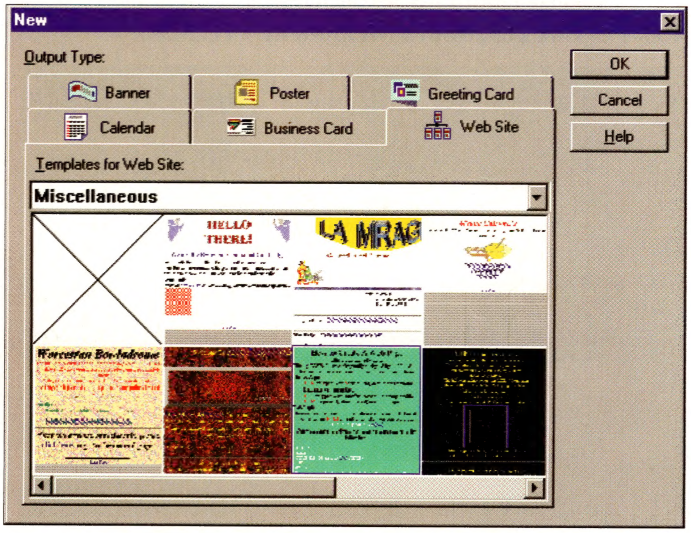


Figure 1 Choosing a template

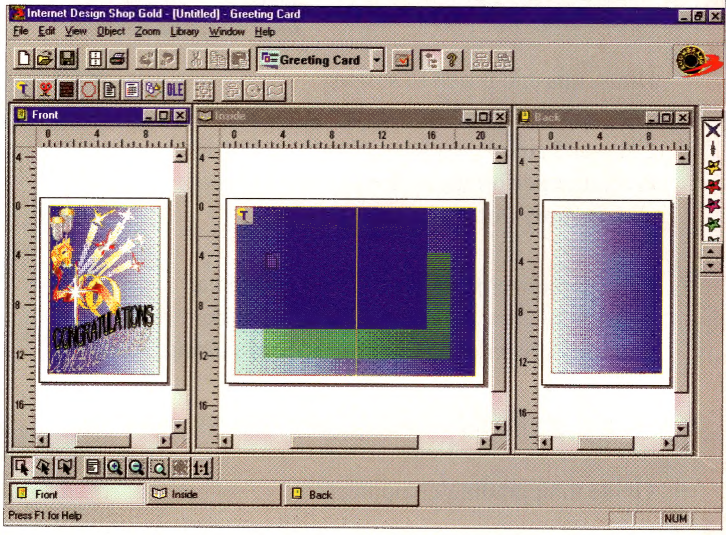
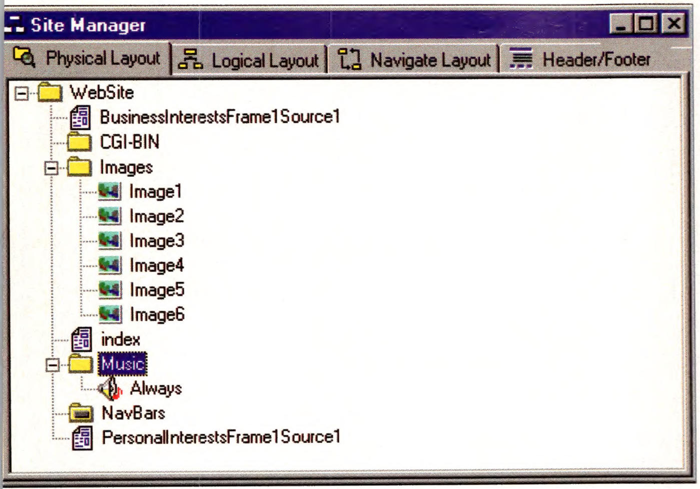
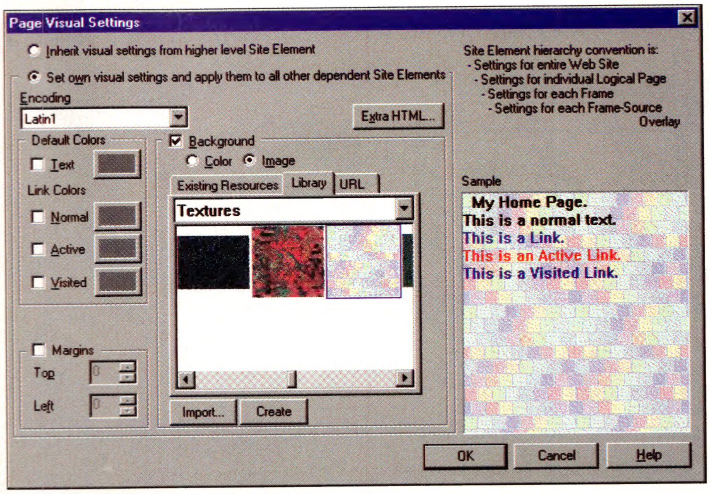

Internet Design Shop Gold - [Untitled] - Greeting Card
File Edit View Object Zoom Library Window Help
Greeting Card
Front
Inside
Back
Press F1 for Help
NUM

Figure 2 Creating a greeting card


Site Manager

- WebSite
  - BusinessInterestsFrame1Source1
  - CGI-BIN
  - Images
    - Image1
    - Image2
    - Image3
    - Image4
    - Image5
    - Image6
  - index
  - Music
    - Always
  - NavBars
  - PersonalInterestsFrame1Source1

igure 3 *The Site Manager*


Page Visual Settings

○ Inherit visual settings from higher level Site Element
● Set own visual settings and apply them to all other dependent Site Elements

Encoding: Latin1

Site Element hierarchy convention is:
- Settings for entire Web Site
  - Settings for individual Logical Page
    - Settings for each Frame
      - Settings for each Frame-Source Overlay

Default Colors: ☐ Text

Link Colors: ☐ Normal ☐ Active ☐ Visited

☑ Background: ○ Color ● Image

Library: Textures

☐ Margins: Top 0, Left 0

Sample:

My Home Page.
This is a normal text.
This is a Link.
This is an Active Link.
This is a Visited Link.

Figure 4 Setting the look of your pages

one of the Site Manager's four windows:

- Physical Layout, which displays the files and resources of your site, much like Windows Explorer
- Logical Layout, which displays the pages of your site in hierarchical form
- Navigate Layout, which presents a bird's-eye view of your site's pages, links and other resources. This view is useful for checking links and ensuring there are no orphan pages or resources
- Header/Footer, where you create headers and footers for use in all or selected pages or frames.

As with most visual design programs, you assemble text, images, links and so on onto your pages in a largely WYSIWYG (What You See Is What You Get) environment. You can assign fixed or relative links, and choose a common look and feel for each page or group of pages. IIDS has its own internal browser for previewing your work, but you can choose to use any external browser of your choice. Once your site is finished, you generate the HTML and resource files (GIF and JPEG images, Perl scripts, links and so on) then upload the site onto your server using IIDS's built-in FTP capabilities.

Navigation bars

The Navigation Bar Generator automatically creates navigation bars to your specifications, complete with page-sensitive links. You can place these on any or all pages, and assign different looks for different groups of pages. In practice, I found the Generator quick and straightforward as long as I was willing to accept its defaults. Beyond this, I encountered limitations. For instance, I couldn't create a Home-

5 Reasons why Organic Food is better for You and Your Children.

1. Enjoy real food, with balanced nutrition as nature intended. You can save on vitamin and mineral supplements and health repair bills.
2. Boost your immune system, concentration and energy levels.
3. Your body does not have to cope with toxic residues from pesticides and fertilisers. Children are exposed to more potentially cancer-causing pesticides in food by weight than adults.
4. Enjoy the flavour — food as it used to taste.
5. Organic farming methods sustain people and the land, ensuring healthy soil to grow food for future generations.

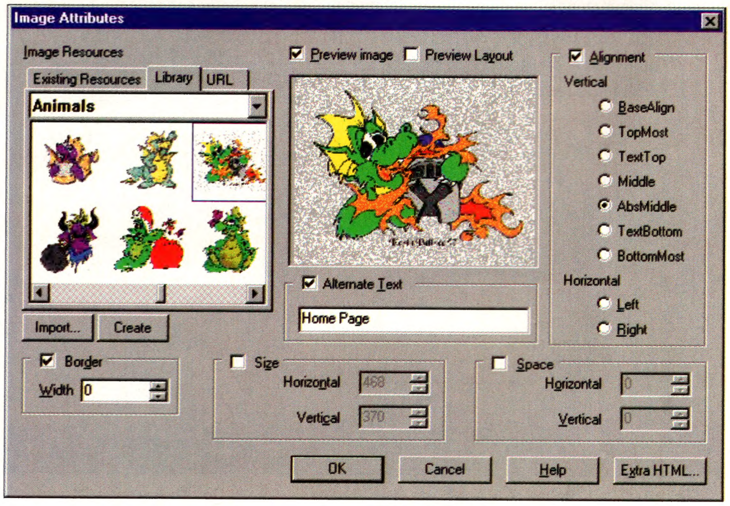
Save your money, your health and the environment

Shop from home, via the internet, phone or fax.

Farm fresh Organic & Biodynamic produce & groceries. Delivered to Your Door by The Green Line (the Largest Organic Retailer in Australia). ORGAA Certified Retailer so you know it really is organic. 100% Money Back Guarantee.

THE GREEN LINE

Ph: (03) 9889 2299
www.thegreenline.com.au



Animals

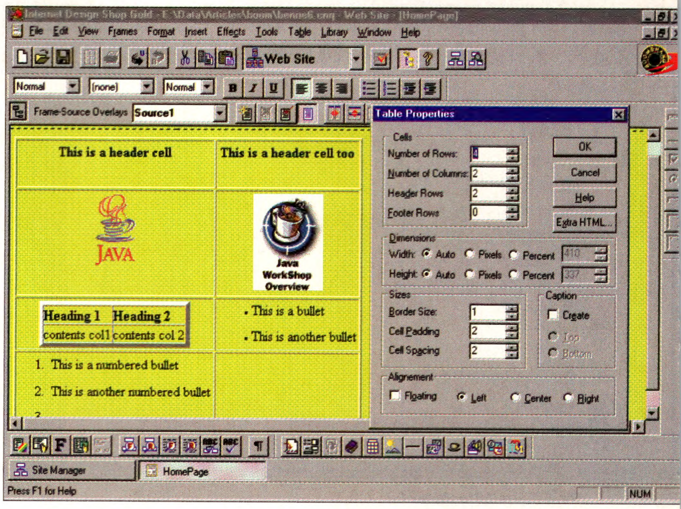
☑ Preview image ☐ Preview Layout

☑ Alignment: ● AbsMiddle

☑ Alternate Text: Home Page

☑ Border Width 0

Figure 5 Inserting an image



This is a header cell	This is a header cell too
Heading 1 Heading 2 contents col1 contents col 2	• This is a bullet • This is another bullet
1. This is a numbered bullet 2. This is another numbered bullet	

Number of Rows: 4

Number of Columns: 2

Header Rows: 2

Footer Rows: 0

Width: ● Auto

Height: ● Auto

Border Size: 1

Cell Padding: 2

Cell Spacing: 2

Alignment: ● Left

Figure 6 Inserting a table

Previous-Next-Last series of buttons with automatic page links unless I put up with a rather useless Self button pointing to the current page. If I tried to create it with the Generator's custom tool, I lost all page-sensitivity. I ended up having to create a separate navigation bar for each page without the Generator's help.

Frames

You can break your page up into as many frames as you wish and arrange them any way you want, whether horizontal, vertical or nested inside another frame. If you use a frame as a navigation window, you can display the frame on each page of your site, or just on the main pages. The design process for frames is pretty much the same as it is for ordinary pages, although creating links is *slightly* more complicated. Frame Source overlays—the information inside the frame—can be embedded into a page or can be an ordinary link.

Database support

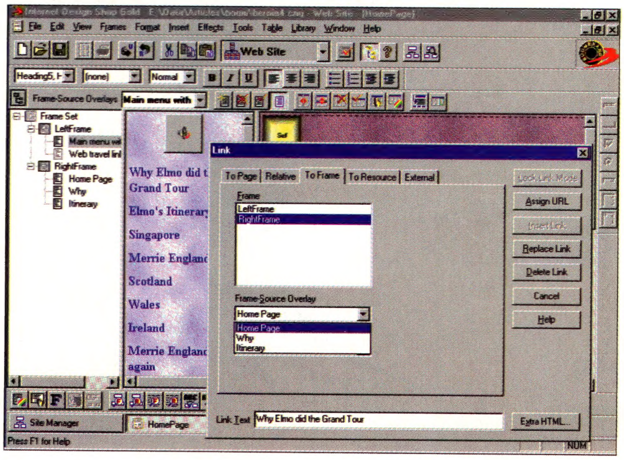
ODBC support enables you to connect your site to a database (or multiple databases) on your server and have user input into your site automatically inserted into the database. Alternatively, you could add a query function to your page and have the results of the query displayed on the user's screen. IIDS automatically generates the CGI scripts for these instances, but you can write your own scripts also. IIDS will import Microsoft Access databases directly, but you'll have to specify the structure of other types of databases yourself; a Database Wizard walks you through this process.

Slots

If you're creating a site with different text or images on the same place in every page, you'll find it much easier if you create templates with placeholders for these objects—or, in IIDS terminology, slots. In this case, IIDS remembers the type and size of the object and reserves the space for it. When you want to insert the object, you just double-click on the slot and IIDS opens the appropriate window, e.g. the Image Library.

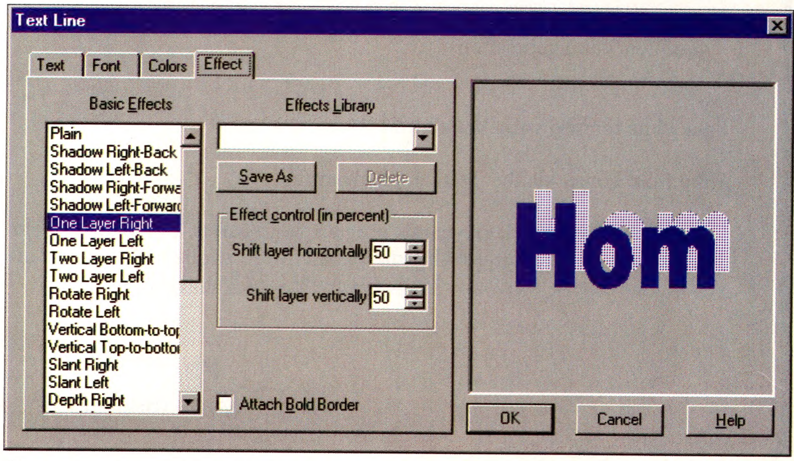
Documentation

IIDS has plenty of documentation—there is a Quick Start Guide, User Guide (in hard copy and electronic format) and the expected context-sensitive online help. However, the overall quality is poor. I found it difficult to find information as topics are scattered in different places, often covered only superficially, and badly indexed. The User Guide is full of grammar and spelling errors, and the thumbnails of the toolbar buttons often don't match with what is on the screen. This, combined with their inconsistent use (sometimes they're there, sometimes they're not) makes it hard to follow the tutorial. However, if you manage to work out which buttons to press, the tutorial is very good and offers an excellent introduction to IIDS.



Link Text: Why Elmo did the Grand Tour

Figure 7 Creating frames



Basic Effects: One Layer Right

Shift layer horizontally: 50

Shift layer vertically: 50

☐ Attach Bold Border

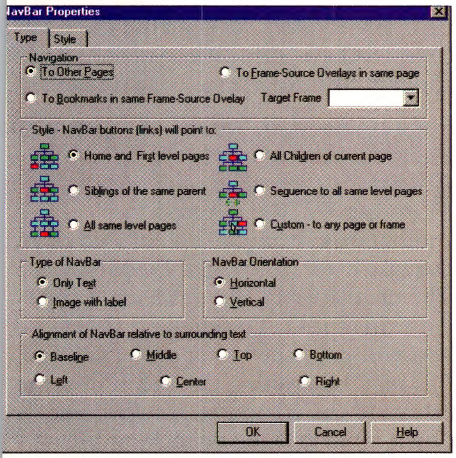
Figure 8 Creating artistic text

ssessment

DS is a nice program with some owerful features, but I found it not at ll intuitive. The toolbar buttons, for xample, aren't arranged logically, and here is no drag-and-drop support for utside programs, even hose bundled with IIDS. t took me a while to vork out how to use ome features not overed in the tutorial, nd the documentation ould be much improved. On the other hand, the whiz-bang features such as automatic navigation bars, frames and database connections are surprisingly easy to use.

Verdict

Suitable for small businesses with a tight budget who need some high-end features such as database connectivity. □



Navigation

● To Other Pages ○ To Frame-Source Overlays in same page

○ To Bookmarks in same Frame-Source Ovelay Target Frame

Style - NavBar buttons (links) will point to:

● Home and First level pages ○ All Children of current page

○ Siblings of the same parent ○ Sequence to all same level pages

○ All same level pages ○ Custom - to any page or frame

Type of NavBar

● Only Text

○ Image with label

NavBar Orientation

● Horizontal

○ Vertical

Alignment of NavBar relative to surrounding text

● Baseline ○ Middle ○ Top ○ Bottom

○ Left ○ Center ○ Right

Figure 9 Using the Navigation Bar Generator

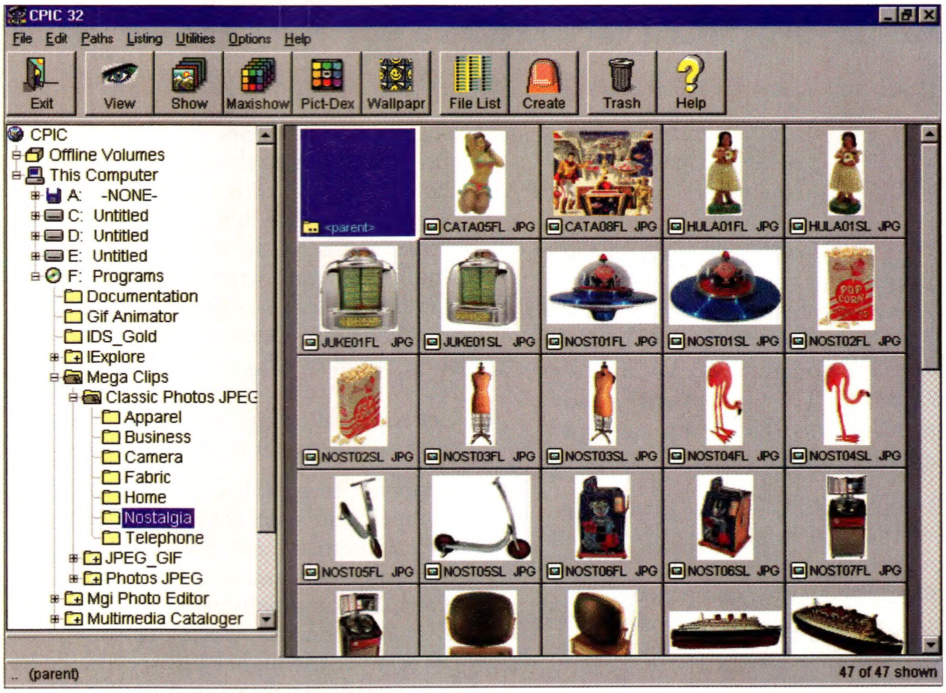


Figure 10 Some of IDDS's graphics displayed in CPIC Thumbnail Cataloguer

MELB PC USER GROUP

SERVICES

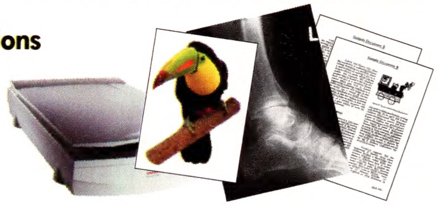
Free daytime internet classes for the retired and unemployed

A series of daytime training sessions during weekdays is planned with the aim of assisting retired and unemployed subscribers to the Internet service of Melb PC.

These small classes of 12 to 14, in seminar format will meet the needs of both beginners and intermediate users. They will be held in the SIG Room at 27 Dorcas Street, South Melbourne.

Subcribers who are interested should fax (03) 9699 6222, or mail (to PO Box 283, South Melbourne, 3205) their request to the office, or contact Stan Johnstone directly by e-mail at *stanj@melbpc.org.au*.

Sessions will commence immediately, and attendees will be contacted directly with session dates and times. □



SCANNNERS + PRINTERS

Free Demonstrations

- Business
- Home
- Medical
- Document
- Bar Code
- Education

www.scannerplace.com.au

Consumables: Ink, Toner, Paper, Disks, CDs

PC User Group Special offer! (While stocks last)
Don't pay $799 (RRP) for Omnipage Pro OCR Text conversion! Simply purchase Omnipage Ver-8 for $269 and get a FREE Flatbed scanner!

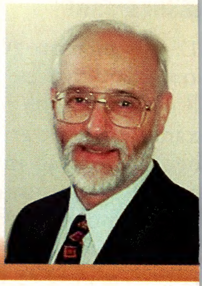
Even if you already have a scanner, this would be a great gift idea because the scanner is FREE!

The Scanner Place®
Freecall
1800 008899

442 Station Street
Box Hill Vic. 3128
Fax (03) 9897 3244

TUTORIAL

George Skarbek



Over-clocking Celeron CPUs

You may have read in a review, conducting a benchmark on the new 500 MHz Pentium III chips, that one of the comparisons was with a 300 MHz Celeron processor running at 500 MHz. Have you wondered how they were able to run a 300 MHz CPU at 500 MHz? They just over-clocked it, most likely without even having to open the computer case.

Running a CPU (Cental Processing Unit) above its rated speed is called over-clocking. This is a very cheap way of getting a faster computer at zero cost. If you can achieve a 300A MHz Celeron running at 500 MHz then you will have nearly 90% of the Pentium III performance at about 10% of the cost.

Most CPUs are capable of running faster than their specified speed but the 300A MHz Celeron has probably the most potential as it uses the core design of the Pentium II with modifications to the cache. As the major costs are in design of the CPU, Intel has used the Celeron to regain the low cost share of the market. During the production of these CPUs, Intel does not run their fabrication plants to produce a certain speed chip and then produce a batch to run at a higher speed. Because of the variability during the processing stage, they test the final product to see at what speed the units are capable of running. As the market determines what can be sold, very many faster CPUs are sold as the slower CPU.

There are two factors that determine the rated speed of the CPU. These are the system bus speed and the internal clock speed. (The bus is the collection of data paths on the motherboard, similar to a multi-lane highway.) The standard system bus speed is 66 MHz so a 300 MHz Celeron has an internal clock speed of 4.5 giving 66 x 4.5 = 300. With proper cooling, most Celerons can be run well above their rated speeds by increasing the bus speed.

However, to be able to run at the faster bus speed, all your other components, such as memory and video cards, must be capable of running at this higher speed. Errors might result from some older components refusing to run properly at the higher bus speeds. To run reliably at a bus speed of 100 MHz, you must have PC100 SDRAM installed.

Dissipating heat is the number one priority in successfully over-clocking any processor. Heat is generated at the core of the CPU, and the faster you clock your CPU, the more heat will be generated.

In the past I have been against over-clocking as it was difficult to do (altering jumpers on the motherboard) and there was a real chance of frying your CPU. However, if you have a relatively new motherboard that allows you to alter the clock and bus speed via the BIOS *and* displays the CPU core temperature *and* allows you to set a limit, which if exceeded automatically slows down the CPU, *then* it should be possible for you to experiment.

See Figure 1 for a BIOS where the CPU speed can be set via the keyboard and the core temperature is displayed.

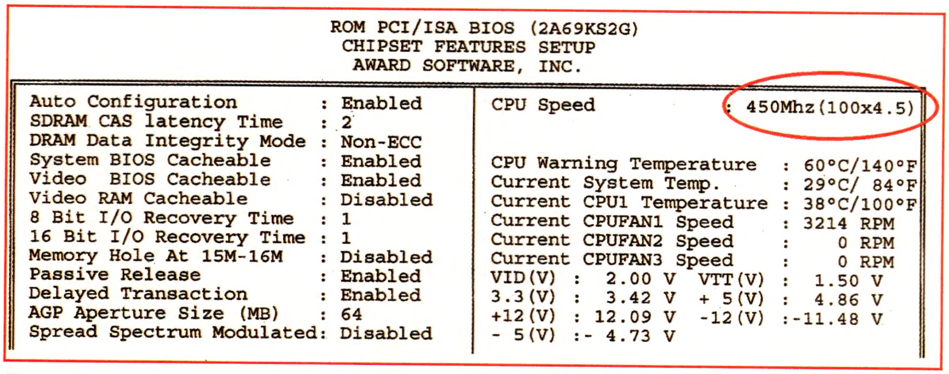
General literature and comments from experienced users suggest that the retail Celerons have adequate heat sinks and cooling. My experience confirms this.

For any user who wishes to experiment, assuming that you have the 300 MHz Celeron, try increasing the bus speed to 83 (to get 375 MHz) and if the computer is stable for one or two days, increase it to 100 (to get 450 MHz). The majority of Celerons should cope with this speed. To achieve 500 MHz you will need the bus speed of 112 and this may be pushing too much in some cases and the computer may become unstable, re-booting or locking up. Overheating may become a problem at this speed in warmer conditions. However, even when running your computer at 450 MHz instead of 300, you will notice quite a significant improvement in performance without having to run any benchmarking software.

With a Celeron the clock multiplier is set to 4.5 and cannot be increased. (Earlier Pentium IIs can have their clock multipliers increased but generally cannot be over-clocked by much.) Therefore, changing the bus speed is the only way of increasing the CPU speed.

Remember to monitor the CPU temperature regularly as you increase the speed. This must done immediately after you shut down. Re-boot, go into BIOS setup and check the temperature. Good ventilation at the back of the computer is essential and a larger heat-sink may be necessary at high clock speed or on very hot days. Prolonged running at a higher speed may shorten the life of the chip. However, the consensus among experts is that you can expect at least 5 years of continuous over-clocked running. By then the 64-bit CPUs running well over 1,000 MHz will probably cost a lot less than the humble Celeron.

Remember that ultimately over-clocking is done at your own risk. A cooked CPU will not be covered by warranty. □



```
                    ROM PCI/ISA BIOS (2A69KS2G)
                      CHIPSET FEATURES SETUP
                       AWARD SOFTWARE, INC.

 Auto Configuration          : Enabled  | CPU Speed              : 450Mhz(100x4.5)
 SDRAM CAS latency Time      : 2        |
 DRAM Data Integrity Mode    : Non-ECC  |
 System BIOS Cacheable       : Enabled  | CPU Warning Temperature    : 60°C/140°F
 Video  BIOS Cacheable       : Enabled  | Current System Temp.       : 29°C/ 84°F
 Video RAM Cacheable         : Disabled | Current CPU1 Temperature   : 38°C/100°F
 8 Bit I/O Recovery Time     : 1        | Current CPUFAN1 Speed      : 3214 RPM
 16 Bit I/O Recovery Time    : 1        | Current CPUFAN2 Speed      :    0 RPM
 Memory Hole At 15M-16M      : Disabled | Current CPUFAN3 Speed      :    0 RPM
 Passive Release             : Enabled  | VID(V) :  2.00 V  VTT(V) :  1.50 V
 Delayed Transaction         : Enabled  | 3.3(V) :  3.42 V  + 5(V) :  4.86 V
 AGP Aperture Size (MB)      : 64       | +12(V) : 12.09 V  -12(V) :-11.48 V
 Spread Spectrum Modulated: Disabled    | - 5(V) :- 4.73 V
```

Figure 1

HPM
TECHNOLOGIES

Have You Got TIME?

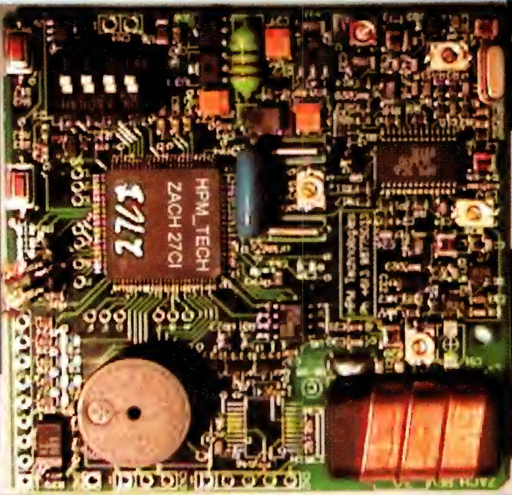
TeleChron clock
tested in Sky Dive
over Corowa
from 10,000 ft on
8 March 1999

Our radio controlled TeleChron Clocks do!

Timing is everything . . . the sky's the limit!

Just plug in a battery or power to our TeleChron range of clocks. Our paged radio messages automatically and precisely set and correct the time every hour to local or one of 15 selectable time zones.

**** Daylight Saving time, Leap Second changes are automatic***
**** A year's plus operation on a single "C" size battery***
**** An all Australian long life and zero maintenance design***
**** Relays, Buzzer, RS232, LED & LCD Displays & Town Hall Clocks too!***



ZACH Time Control Radio Pager Module & TeleChron Products

Ultra low power,
1 to 9vdc, 250µa to 15ma,
External Elect. Watch-Dog,
RS232/485 Comms,
On-Board or Ext. Antenna, Over the air re-programmable

Analog, Digital, DCF, Serial,
LED, LCD TIME, ASCII, Binary &
Linked, Data Messaging,
PC World Time Clock

A unique radio paging product for data, real time and control applications

On and off board relays with multiple time periods at user defined time and dates. Versatile Sub-addressing within paged messages allows for data and control applications to be addressed on a whole, group or individual basis.

Applications: ...power, security, data loggers, PCs, signs, lighting... ...synchronising controls, events, irrigation, anti-theft, real time products

New Technology from HPM Technologies Pty.Ltd.

Unit 8, 2 Apollo Crt, Blackburn, Victoria 3130 AUSTRALIA
TEL: +61-3-9877 5033 FAX:+61-3-9877 5133
www.hpmtech.com.au

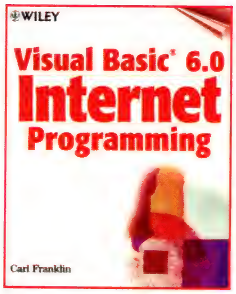
Tony Stevenson

Seeing the Basics: VB 6.0 and Internet programming

Scarcity of Visual Basic Internet programming books

Given the importance of the World Wide Web in both business and consumer computing, it's odd that relatively few books have been written that focus solely on the subject of Visual Basic and Internet programming.

And while it's true that a large percentage of Visual Basic programming books do include at least some material about developing VB applications for the Internet, it's usually only one or two chapters that frustratingly leaves you wanting more information.



However, one new book that offers a comprehensive coverage of this aspect of software development is Carl Franklin's *Visual Basic 6.0 Internet Programming.*

Understanding Winsock

As Franklin points out in the foreword to his book, Windows programmers use the Winsock library of functions and routines to process information from the Internet and Web.

However, there are a couple of different ways of using the unique features of the Winsock library.

The first approach is to call the Winsock API (Application Programming Interface) directly from within your Windows programs. The alternative is to take full advantage of the programming construct that has made Visual Basic one of the most popular development environments ever devised, that is, its use of controls.

Accordingly, Franklin's code uses a Winsock control for communications (see "Contents of the companion CD-ROM" below, for more information about this control). He believes the extra response time resulting from using such a control, as opposed to direct calls to the API, only amounts to possibly a few more nanoseconds, if that.

But the control's use is more than compensated by the convenience and ease of use it offers. He suggests that if time does become a major concern in your VB Internet applications, the best solution for performance is to find an Internet Service Provider that offers a faster connection.

Getting started with Internet programming

The opening chapter of *Visual Basic 6.0 Internet Programming* provides an explanation of protocol stacks and the OSI (Open Systems Interconnection) Reference Model. Other topics covered in this section of the book include the TCP/IP (Transmission Control Protocol/ Internet Protocol) model, IP names and addresses, IP ports, name resolution, and sockets (in the simplest of terms, a socket contains an IP address and port).

And while it's true that you can skip over this part of the book if you're only interested in the practical aspects of Visual Basic Internet programming, Franklin does point out that "knowledge of these concepts can help you understand where your Visual Basic application fits in the big picture".

Other topics covered

In the remainder of the book, the sorts of topics covered include a comprehensive discussion of Winsock programming; simple protocols (NTP, WHOIS, FINGER); Usenet news; electronic mail; FTP (File Transfer Protocol); different techniques for accessing the World Wide Web; an introduction to Visual Basic objects; server-side programming; Microsoft Internet Information Server; and the creation of custom Winsock client/server applications.

This column provides techniques, tips, and tricks to help you gain familiarity and experience with MS Visual Basic, a popular language that enables you to write both Windows and World Wide Web applications quickly.

Contents of the companion CD-ROM

The companion CD-ROM comes with an unregistered version of the Dolphin Systems' dsSocket ActiveX control that's used for Winsock programming. Using a control like this provides all the precision needed, but just as importantly, frees up developers from having to cope with learning how to program using the Winsock API.

Other contents on the CD-ROM include all the sample code used throughout the book, along with comprehensive Internet Protocol Documentation consisting of all the RFC (Request for Comments) documents up to the 24 January 1999.

Intended readership

So what type of reader is "Visual Basic 6.0 Internet Programming" aimed at?

I believe that if you're just starting out with VB, it would be a good idea to read some introductory texts before tackling Carl Franklin's book.

However, if you feel reasonably comfortable moving around within the Visual Basic development environment, or you've already written a number of programs, reading this book can help you to develop expertise in an entirely new area of VB programming. And that, of course, makes you a more marketable proposition if you're a professional programmer.

It also means that serious VB hobbyists who read it can extend their programming pastime to write applications that incorporate facilities such as email; Usenet news; File Transfer Protocol; and other aspects of World Wide Web access.

elated Web sites

s well as a companion D-ROM for this book, there also a companion Web site hich contains a knowledge ase. Franklin has established as an effective way of ealing with any issues rising out of reading the ook, as well as for roviding answers to uestions about the sample ode used throughout the ext. Point your browser at *ttp://carl.franklins.net/vbip/*

nother Web site definitely orth checking out is "Carl Gary's Visual Basic Home age" located at *http://www. gvb.com/* (not surprisingly, he Carl referred to is Carl ranklin). If you're serious bout VB programming, you hould have this site listed in he favourites or bookmarks ection of your preferred rowser. And make sure to rop in frequently to keep p with the latest developments with Visual Basic.

Conclusion

Visual Basic has changed forever the way both professional and hobbyist programmers write their Windows applications.

With the popularity of the Internet, and in particular, the World Wide Web, showing no signs of abating , it makes sense to extend your VB knowledge now to write VB Internet applications.

The guidance, tips, and real code examples provided make Carl Franklin's *Visual Basic 6.0 Internet Programming* an excellent place to start.

Carl Franklin
Visual Basic 6.0 Internet Programming
ISBN: 0 471 31498
430 pages plus companion CD-ROM and Web site
Published by John Wiley & Sons, Inc.
Distributed in Australia by Jacaranda Wiley Ltd
RRP: $85 □

Computer Consultants and Repair Specialists
All Software & Hardware Problems Solved.
Prompt & Friendly 7 day on site Service.
MS DOS, Windows, Networks, Internet.

POLLOCK Computer Services

Internet Tuition & Configuration a specialty Members Discounts
Phone 9533 5002 Mobile 0412 543 841 Fax 9598 3186
lynn@melbpc.org.au www.sustance.com/pollock

Modem Superstore
Melbourne's Best Mail Order Modem Specialist
We specialise in modems
from the following makers

Maestro -◆- Dynalink -◆- Banksia
Netcomm -◆- USRobotics

-◆- Delivered to your door -◆-
Call Denise or John for prompt service
Tel: (03) 9899 4744 Fax: (03) 9897 3939

A Better Computer Solution!
Authorised Intel dealer
Talk with the people who REALLY know...

High performance systems, with the best quality components, can be yours — built exactly to your own specifications. Talk to us. We are keen to listen to ***your*** needs and will assist you in planning ***your*** computer.

Computer Rebuilds can also advise you on CD-ROMs, Hard Disks, Memory and Processor Upgrades, Multimedia and Networking solutions.

Morris Tobias has been a member and long-time supporter of Melb PC since 1987. Hundreds of members have benefited from his expertise.

PC Update READERS' CHOICE 94 WINNER

Winner of PC Update Readers' Choice Awards — Computer Repairer/Upgrader

Call him for an obligation free assessment!
COMPUTER REBUILDS
Board & Drive Upgrade Specialists
423 City Road, South Melbourne Vic 3205
Telephone (03) 9682 3122 Fax (03) 9682 2566

CR COMPUTER REBUILDS

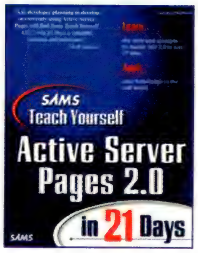
PC Update Readers' Choice Awards 96 Winner

BOOK REVIEWS

Tony Stevenon

SAMS Teach Yourself—in 21 Days

Mastering ASP 2.0



The role of Active Server Pages (ASP) technology is to make it easier to construct sophisticated, interactive Web sites that are characterised by their dynamic nature.

However, there is a considerable amount of learning to complete to become proficient in ASP. But that's where the recently published book, *SAMS Teach Yourself Active Server Pages 2.0 in 21 Days* can help.

Written in a tutorial style, and conveniently divided up into three manageable weeks' worth of work, the book covers everything from the fundamentals of ASP 2.0 through to an explanation of sophisticated user interaction techniques that use, for example, HTML forms, Java, ActiveX, etc.

The days in week 1 of the text focus on topics such as the basics of ASP and the various parts of an ASP application; different techniques for user interaction over the Web; the construction of Web forms and the subsequent validation and processing of data returned via those forms; along with the use of scriptlets (self-contained code components) to improve code re-use in ASP applications, to facilitate alterations, to ease distribution, and so on.

In week 2, the emphasis is on the more advanced topics covering Web database application develop- ment; the deployment of ASP objects and components; and the use of "cookies" to capture and then retain information between sessions. (A consequence of visiting some Web sites is to have odd-looking files automatically deposited on your hard disk. Known as cookies, the contents of these files are used on subsequent visits for customisation purposes, for example, to display only those details previously requested.)

The final week is for those readers who want to really maximise their use of ASP. Topics covered include the construction of custom ASP components using Microsoft's Visual Basic programming language; the steps involved in the development of complex client/ server applications; and ASP security issues and concerns.

Each day concludes with a "Workshop" section consisting of a quiz and a set of exercises. These have been designed to both test and broaden your understanding of the material covered that day. They also provide opportunities for some practical experience as well. For example, in some cases, you are requested to alter the code in an application, while in others, the task may involve creating an ASP script. (Note: the book's companion Web site contains all the source code and sample applications used throughout the text in a format ready for downloading onto your machine.)

For anyone serious about learning the ins and outs of ASP, *SAMS Teach Yourself Active Server Pages 2.0 in 21 Days* offers a comprehensive tutorial. However, be prepared for a solid workout because there is a lot of material to be covered in the three weeks.

Sanjaya Hettihewa
SAMS Teach Yourself Active Server Pages 2.0 in 21 Days
ISBN: 0 672 31333 2
724 pages plus companion Web site
Published by SAMS Publishing
Distributed in Australia by Prentice Hall
RRP: $79.95

Graduating to XML

As in all areas of computing today, the technologies associated with the World Wide Web are also constantly changing.

And that's clearly evident with the ongoing evolution of tools, standards, and languages specifically designed to

Are you running a business or surfing the web?

Australian-made Vet Anti-Virus has all the protection you'll need to lock computer viruses out of your valuable documents and applications. Confidence in Vet's abilities extends from fellow surfers to governments, banks and companies in over 30 countries. Contact us now and feel the security only Vet can offer.

Mention that you are a member of the Melbourne PC User Group and receive a **10% discount** off the RRP!

Phone: 1300 364 750 Web: www.vet.com.au
Email: info@vet.com.au Mail: Vet Anti-Virus
1601 Malvern Rd, Glen Iris Victoria 3146.

vet

All the Anti-Virus you need

Person-to-Person Auction!

☑ **Buy or sell anything on the Internet wordwide!**
☑ **Enter and describe your own equipment**
☑ **Include a photograph if you want!**
☑ **You set the price when you bid!**

Bids start at $1

For further information
PH: (03) 9415 1964 Fax (03) 9416 2295

www.auctiontrader.com.au

evelop increasingly more owerful Web sites.

prime example of one of the ewer languages is XML, a contraction for *Extensible Markup anguage*. XML has been devised o overcome the shortcomings f HTML (Hypertext Markup anguage), which, so far in the hort history of the Web, has een the language traditionally sed to construct Web pages.

However, keeping up to date with the latest technological dvances is not always easy. An ffective way is to get hold of ooks that break up the subject matter into digestible chunks.

For instance, for anyone wanting to understand the mpact that XML is already aving on Web development, and which is likely to significantly increase in the near future, one such book is *SAMS Teach Yourself XML in 21 Days*.

Its 21 days of information have been conveniently organised into three weeks, with the first week concentrating on the basics of XML; the second week covering the more powerful aspects of XML authoring; while the third and final week discusses how to process XML and HTML code.

The manner in which this book has been structured makes it possible for readers to pick out their own starting point, depending on their previous XML experience.

For example, those already familiar with the basics could proceed straight to the lessons contained within Week 2. The topics covered there include XML objects and entities; the creation of XML links; the advanced addressing capabilities available in the language; viewing XML in both Microsoft Internet Explorer and other browsers; and so on.

SAMS Teach Yourself XML in 21 Days is practical. It contains plenty of code fragments that are used to explain the theory being discussed. Additionally, each day concludes with a set of exercises enabling you to test out your newly acquired XML knowledge.

Another appealing feature of the book is its appendix of XML resources, especially online resources. These consist of the addresses of Web sites (with brief summaries) that cover XML applications, standards, information sources, software companies, and so on.

To find out more about XML (even if you're a complete novice), or to expand your existing knowledge, take a look at *SAMS Teach Yourself XML in 21 Days*.

For convenience, a companion Web site contains all the code and working samples that have been used throughout the text.

Simon North and Paul Hermans
SAMS Teach Yourself XML in 21 Days
ISBN: 1 57521 396 6
580 pages plus companion Web site
Published by SAMS (a division of Macmillan Computer Publishing)
Distributed in Australia by Prentice Hall
RRP: $59.95 □

Stock-Take Clearance

Toner Carts

Popular Models from $59*

Laser: Compatible to Suit

HP	5L/6L (C3906A)	$59*
	4L/ML/4P/4MP (92274A)	
	LJII/IID/III/IIID (92295A)	
	IIP/IIP+/IIIP (92275A)	
Canon	LBP460/660 (EPA)	
	LBP 4U/4i/430W (EPP)	
	LBP8II/8III (EPS)	
	LBP4/4+/4lite (EPL)	$59*
HP	LJ4/4M/4+/5/5M/5N	$89*
Canon	LBP81V/1260/1260+	
OKI	OL400/800 series	$15*

Copier: Compatible to Suit

Canon	FC1/2/5/PC7/11	$119*
	PC20/25	$119*
Sharp	Z50/70/88	$89*
	Z30/Z20/25	$89*

Xerox, Brother, NEC, Apple, Panasonic & more available

100% Money Back Guarantee

Recycled

*Includes $10 Cash Back on your old cartridge

Great Deals On Papers

Coated Inkjet $19.95 200 A4 sheets
Limit 5 per customer

Bright White Inkjet 99c 50 A4 sheets *105 gsm*

HP Photo $18.50 20 A4 sheets

Epson Photo Gloss $19.95 20 A4 sheets

A3, A2, Photo & Matt Available too!

INKJET REFILL KIT

FREE DEMO *Just bring in your empty cart*

To Suit HP Epson Canon Lexmark Apple & More

Resolution

Up to 60 fills From $49!

- Easy to Use - *5 minutes is all you need*
- Perfect printing or your money back
- Extra Large Capacity
- *SuperFiltered*™ US Ink extends printhead life!
- Compatibility Guaranteed

100% Money Back Guarantee

FREE Delivery Australia Wide

Original Inkjet Cartridges!

From $29.95

Epson		
400/500/600/Photo/700/EX	S020093	$29.95
400/600/800/850/1520	S020089	$39.95
Photo/700/EX	S020110	$39.95
Canon		
BJ10/20/Starwriter	BC01	$39.95
BJ200/230/BJC210/240/255	BC02/03	$39.95
BJC4000/5000 series	BC20	$49.95
Hewlett Packard		
400/500 series	51626A	$49.95
600 series	51629A	$49.95
Lexmark		
4076/1020/2030/2050	1380620	$49.95

DECAdry PC Papers

Item	No.	Not	Now
Bus. Cards	500	~~$29.95~~	$8.95
Letterheads	100	~~$29.95~~	$8.95
Certificates	100	~~$35.00~~	$8.95
With Comps	300	~~$29.95~~	$8.95
Envelopes	50	~~$22.95~~	$8.95
3-Fold	100	~~$29.95~~	$8.95
Invitations	100	~~$29.95~~	$8.95

46 Glenferrie Rd
MALVERN, 3144

Mon - Friday: 9 - 5.30
Saturday: 9.00 - 12.00
Fax: (03) 9576 3144

Phone, fax & mail order welcome.

Tel: (03) 9576 3122

Office NET Inkjet, Paper & Laser

HARDWARE REVIEW

John Oswald

Sharp Actius A150 Ultra Light Notebook

I have always wanted a portable computer, or at least since the early days of computing. I remember lugging my computer components to a meeting of the Ballarat SIG many years ago. There had to be a better way.

As portables became laptops and as laptops eventually led to palmtops, I enthused that the time for a purchase was imminent. However, people were still lugging portables around in one case, with their other needs in a separate case. This, of course, meant that they would be well balanced, a heavy weight on each side. The desirable ones were also all very expensive.

So I considered what I needed, and waited till the right machine came along. I wanted:

- A lightweight inexpensive machine
- A good screen
- Good life battery
- A sizeable hard disk
- State-of-the-art Windows (98) with fairly universal connectivity.

The tiny Toshiba Libretto appealed, but the keyboard was too small, and the screen pedestrian and compact.

I did not want to carry around a heavy external power source, or a

- Floppy disk
- Large keyboard
- Mouse
- CD-ROM
- Multimedia paraphernalia
- Printer.

But I would want them to be available on my desk at home.

So I was delighted when I read that Sharp had released its new ultra-light notebook, the Actius A150. It is only the size of an A4 sheet of paper, and 21.2 mm thick (for those of you who are wedded to American technology, that is less than one inch!). It was the star of the USA autumn (Fall) Comdex and won the *PC Magazine* Editors' Choice Award, January 1999. It weighs only 1.4 kg! The price, under $4,000!

It had:

- A 266 MHz Pentium Processor
- 64 MB of EDO RAM
- 2 MB video RAM
- A 4.3 GB hard disk
- A 28.7 cm (11.3 inches) SVGA (800 x 600 dots) TFT LCD with High Aperture technology, which provides a 250:1 contrast ratio (2.5 times higher than the average notebook PC). An unbelievable screen
- A very usable keyboard, with a beautiful feel
- A built-in 56 kbps modem, and a high-speed infrared port
- A great glide pad to control the mouse
- A PCMCIA2 slot for a network card and a USB port
- A built-in battery with a 2.5 hour life, and a lightweight, small external power source
- An infra-red port
- Multimedia capability.

It also has, as an external port replicator, a floppy disk device, which in turn can be connected to keyboard/mouse, and printer. An external CD-ROM and a long life (eight hour) external battery were also available.

It has a video port at the back, so if I need to do a PowerPoint presentation, it is just a matter of plugging in the cable.

I will be happy with my Sharp for a long time to come

The computer fits in one half of my satchel, leaving plenty of room for other papers and paraphernalia. It has a case made from wetsuit material, but even in this jacket it is only the size of a small handbag.

Everywhere I take the Sharp, people want to talk about it. It is impressive, from its compactness, to its brilliant screen, to its magnesium alloy case.

So what else could I ask for? Perhaps the port replicator could be more convenient, constructed as a base plate, with the floppy, CD-ROM, printer, screen and power source connections, with a bayonet lock to secure the Actius as a top layer. Perhaps more user-friendly power management tools, and instantaneous boot up, but that might be up to Microsoft.

The next model was scheduled for release in the USA on 4 June. The Actius 250, (*http://www.sharp-usa.com/daa.asp?bname=2012*) has a 300 MHz chip, a built-in 10Base-T and a 100Base-TX LAN port, and a bigger hard disk. The retail price of the new machine is under US$2,500. So how long can you wait before you plunge in? I will be happy with my Sharp for a long time to come.

Jean D'Andrea

Volunteers' corner

It's a long time since I've written anything for the magazine, but here's an expanded version of a post I recently made in *melbpc. general*. Hopefully, there will be regular information for volunteers in future, the Editor permitting, of course. And yes, there *is* a smiley there!

Since I don't, apparently, have enough to do, and am a bit crazy as well, I've recently become the Melb PC Volunteer Co-ordinator.

This means I'll be looking for people who are willing to help out in various areas of our Group. It doesn't matter whether you're an expert user or a novice with PCs—you still have something to offer— a small part of *yourself!* If you've enjoyed being a member of Melb PC, and would like to give a little something back to the Group, how about a little time?

If you have any time to spare, and would like to help out in any way, please let me know. I'll follow it up, and let you know which areas are currently in need of help. It doesn't have to be on a regular basis—whenever you can help out is fine! I'm currently building a database of those requiring, and those willing to give, assistance, so please don't leave me in the dark!

Contact information can be found at the end of this article.

Present needs

At the moment, we have a need for two or three people to staff a "New Members Table" at the monthly meetings. Members on this table would welcome first-time attendees and new members, give them information, a few friendly words, and a welcoming smile. If you usually attend the meetings, and would like to be more involved, please let me know.

As you all know, the Group has a presence at many Swap Meets, most of which are staffed by a few regular attendees. We would like to have more members willing to help out for a few hours, at a Swap Meet convenient to them. Give it a try, people—it's fun, you'll meet lots of members and others attending the meets, and best of all, you'll feel good when you can help someone solve a problem! Who knows, you might even learn a few things along the way...

Do you need volunteers for your area?

All you SIG Leaders, System Operators, in fact, all those who need helpers, do you have enough volunteers to cover your responsibilities? Could you use some more help? If so, I'd like to know, so that I can match you up with a volunteer. If I don't have anyone registered with expertise in the relevant area, I'll do my best to find someone for you, but you have to let me know!

Current/lapsed volunteers

If you're currently a volunteer, please tell me which areas you're involved in —I've got lots of phone numbers, but ringing you all could be a long process. If you have been a volunteer, and have had to stop due to other commitments, tell me, so that I can remove you from the database. That way, you won't be called unnecessarily when there's a need to be filled.

Hope to hear from you soon!

Jean D'Andrea
Volunteer Co-ordinator
Melbpc User Group

If you don't have a modem, you can phone the office during business hours (9699 6222) and they will forward your message to me.

E-mail: jda@melbpc.org.au
BBS: Jean D'Andrea—Send your message in area loc.13

About the author

Jean has been a member of Melb PC for some years, and during that time has been a volunteer in various areas, including a year on the Committee. She has written a number of articles for *PC Update* in the past. ❑

HUGE COMPUTER SWAP MEETS

Sunday 4th July
MALVERN TOWN HALL
cnr High St & Glenferrie Rd
ROYAL MELB. SHOWGROUNDS
Epsom Rd, Ascot Vale

Sunday 11th July
SPRINGVALE CITY HALL
397 Springvale Road
COLLINGWOOD TOWN HALL
140 Hoddle Street

Sunday 18th July
IVANHOE CENTRE
275 Upper Heidelberg Road
THE CAMBERWELL CENTRE
340 Camberwell Road

Sunday 25th July
BOX HILL TOWN HALL
1022 Whitehorse Road
MOORABBIN TOWN HALL
985 Nepean Hwy, (at South Rd)

Everyone welcome to Buy — Sell — Exchange
9 am to 4.30 pm, Entry $2.50, Stands from $6.00
For details phone (03) 9886 1466 (BH)

FREQUENTLY ASKED QUESTIONS

Carnegie Mellon Universit

The Melissa virus

How many reports have we received?

We have first-hand reports of more than 300 organizations affected, covering more than 100,000 individual hosts.

Is the damage limited only to denial-of-service?

No. Under some circumstances, confidential documents can be leaked without the user's knowledge. These circumstances include the use of a single template file by more than one user, and the transmission of an infected document to another user who has not previously been infected. Additionally, if you fail to clean up the virus correctly and completely (for example, by not cleaning the normal.dot file) you may expose confidential information at a later time.

What about Papa, and other variants?

We have received reports of other variants of Melissa, including one named Papa. At the present time, we have not received a significant number of reports of Papa outbreaks. If you practice antivirus precautions on a regular basis, you can protect yourself against Papa and other variants of Melissa.

Are Macro viruses new?

No. According to the Department of Energy's Computer Incident Advisory Capability (CIAC), macro viruses for Microsoft Word appeared as early as 1995, with over 1000 variants for Word and other products by 1998. See *http://www.ciac.org/ciac/bulletins/i-023.shtml* for more information.

Why was Melissa so serious?

Melissa was different from other macro viruses because of the speed at which it spread. The first confirmed reports of Melissa were received on Friday, March 26, 1999. By Monday, March 29, it had reached more than 100,000 computers. Some sites had to take their mail systems offline. One site reported receiving 32,000 copies of mail messages containing Melissa on their systems within 45 minutes.

Are Macro viruses limited to MS Word?

No. Macro viruses can affect other products, including other products from Microsoft such as Excel and PowerPoint. The Papa virus, for instance, is reported to be spread via Excel.

Is Melissa a worm?

Melissa requires user interaction to propagate, therefore we do not consider it a worm. However, Melissa can propagate quickly from one computer to another with minimal interaction required by the user.

Does the Melissa virus affect MacOS?

The Melissa virus can infect files stored on and shared with MacOS-based systems running Word 98. However, when the virus runs on MacOS systems, it is not able to send electronic mail, and its propagation will be slower on MacOS systems.

Can I protect myself by marking the normal.dot file read-only?

At best, marking the normal.dot file read only is a stop-gap protection. On Windows 98/95 systems and on MacOS, viruses can circumvent the read-only protection. Instead, we recommend setting Word to prompt the user before making any changes to the normal.dot file if you are concerned about changes to that file.

How can I protect myself against variants of Melissa?

Disable macros by default. Use caution when operating any product when macros are enabled. Keep your antivirus products up-to-date. Be leery of unsolicited documents or executable programs received in electronic mail. Beware of software that comes from untrusted sources.

Who wrote Melissa? Why was Melissa written? What crimes has the author committed? What is the status of the investigation?

The CERT Coordination Center is a technical organization. We concentrate on the technical aspects of computer security problems. We have no legal authority and we do not "catch the bad guys."

Can I be affected if I don't use Outlook?

If it is installed, Outlook is used by the virus to send mail. Otherwise, Melissa behaves like a normal virus: you can infect others by carelessly sharing files.

I use a mail package other than Outlook. Am I affected?

The mailer you use to read mail doesn't matter. The virus will use Outlook, if Outlook is installed, to send copies of itself. How you receive it doesn't matter.

How effective are systems that look at the subject of the mail message?

Systems that rely solely on pattern matching to recognize the virus can be used as a stop gap measure to prevent the spread of a particular virus, but will fail as soon as the virus mutates so that it no longer matches the pattern. This can be very effective as a short-term fix, but will not provide long-term protection.

Is Melissa the most dangerous virus possible?

Melissa was relatively non-destructive and easily detected. Variants could be significantly more destructive or stealthy. We strongly encourage you to be aware of the risks posed by viruses and other computer security concerns at all times.

Are you aware of the connection between the Melissa virus and the television show The Simpsons?

Yes.

What products are affected?

Outlook 98 and Outlook 2000 for Windows platforms can be used to propagate the virus. Microsoft Word 97 and Word 2000 for Windows and Word 98 for Macintosh can be used by the virus to infect other documents. Earlier versions of Word, including Word 95, cannot be used to infect other documents, nor can Outlook Express on any platform be used to propagate the virus via e-mail.

Why is it called Melissa?

It was named Melissa by the antivirus software vendors.

Do you have to open the e-mail attachment to be infected?

Yes. To be affected by Melissa and other, similar macro viruses, you must open the attachment and permit macros to run. You cannot be affected by Melissa or similar viruses merely by receiving the e-mail.

If I receive the virus mailed to me by someone, should I notify them?

Yes. We encourage you to notify them. More information about dealing with incidents can be found in our *Incident Reporting Guidelines* at *http://www.cert.org/tech_tips/incident_reporting.html*

I am a novice user and know little about computer language. I read your virus alert and tried to determine whether or not my Word macros were disabled. I use Office 97, professional version, and did not find a way to disable the macro function. However, under the menu options "Tools/Options/General" I found a checked box that says "Macro virus protection."

Will this option provide adequate protection against the Melissa macro virus and other, similar viruses?

If this option is checked, Word will give you a warning any time you open a document that has macros embedded in it. The warning will give you the opportunity to prevent any macros from running.

Are the Melissa macro virus and Happy99 the same thing?

No. While Melissa is a macro virus, Happy99.exe is a Trojan horse program. For more information about Happy99.exe, please see *Incident Note IN-99-02 Happy99.exe Trojan Horse* at *http://www.cert.org/incident_notes/IN-99-02.html*

"..and when I said my name was Melissa, he got all nervous and asked me to leave his PC alone."

About CERT

Copyright © 1999 Carnegie Mellon University. This document is available from: *http://www.cert.org/tech_tips/Melissa_FAQ.html* and is reprinted with the permission of

CERT Coordination Center
Software Engineering Institute
Carnegie Mellon University
Pittsburgh PA 15213-3890
USA

CERT/CC advisories and FAQs are periodically updated and the most current version is available at *www.cert.org*. ❑

PRINTER SALES
REPAIRS and SPARE PARTS

Laurie Rooney

Telephone: (03) 9887 4877
Facsimile: (03) 9800 1777
E-mail: intoki@minerva.com.au

Factory 2
9 Sherwood Ct.
WANTIRNA 3152

INTRONICS (AUST) Pty Ltd
ACN 070 835 488

OKI-Microline SPECIALISTS
Refurbished Printhead Service
Computer — Printer Cables & Accessories
AUTHORISED OKI SERVICE CENTRE

PETER McGUIGAN'S
NOTEBOOKS GALORE

COMPAQ
HEWLETT PACKARD
TOSHIBA
IBM
NEC
Acer
MiTAC

LARGE RANGE
UNBEATABLE PRICES

30 Notebooks on display – 18 years trading integrity
Mail order a speciality – Delivered nation-wide

90 day Warranty and 30 day's money back Guarantee
on used Notebooks – Trade-ins accepted

Small, portable, Notebook Ink Jet Printers
Modems, Network Cards, SCSI, GSM, Hard Disks
Memory for Notebooks always available
(even for old models) and Carry Cases
External CD-ROM Drives

NEW
USED
EX DEMO
SUPERSEDED
BUY
HIRE

15 Brighton Rd.
St Kilda VIC
(opp. Town Hall)

Ph: (03) 9537 2233
Fax: (03) 9537 2266
lester@eisa.net.au

nmit
www.nmit.vic.edu.au

windows NT administration courses

Gain the necessary practical and theoretical skills needed to prepare for the MCSE certification.

The Systems Engineer Certificate Windows NT (126 hrs) $2,040
Topics covered equivalent to the core component for MCSE certification.
• Tues 27 July, 9am-5pm

Network Essentials (24 hrs) $390
Topics covered equivalent to core component (70-073) needed for MCSE certification.
• Tues 27 July, 9am-12noon

Windows NT V4 Workstation (18 hrs) $360
Topics covered equivalent to core component (70-073) needed for MCSE certification.
• Tues 10 Aug, 1-4pm

Cert. in Windows NT V4 Server Administration (42 hrs) $760
Topics covered are needed for the successful implementation of a Windows NT network.
• Thu 22 July, 6-9pm
• Sat 7 Aug, 9am-4pm

Cert. in Advanced Windows NT Server 4.0 Administration (42 hrs) $890
Topics covered are to enhance your skills in administrating a NT multi domain environment.
• Tues 3 Aug, 6-9pm
• Sat 7 Aug, 9am-4pm

The MCSE Certification test is conducted independently at any of the Microsoft test sites in Australia.

For more information phone (03) 9269 1483.

Northern Melbourne Institute of TAFE

Quality System
Quality Endorsed Company
ISO 9001 Lic 4170
Standards Australia

Keit
Phillip

QBASIC and the "Figure it Out" puzzle — Part 1

The Age Saturday Extra publishes a puzzle called "Figure It Out" where the ten letters A-H, J, and K represent ten digits 0-9 with no values duplicated. Two of the values are given and the problem is to find the other eight. Ken Holmes in *PC Update*, Oct 98, used a trial and error QBASIC program to solve the puzzle.

This program uses an algebraic method. Run QBASIC, type in the code from Listing 1 and Listing 2 and save the program, or download FIGUREIT.BAS from the BBS.

```
DATA  b,  2,  d,  9
DATA  g,  d,  b,  a,  j,  18
DATA  e,  f,  h,  b,  k,  22
DATA  g,  g,   ,  a,  c,  18
DATA  c,  d,  k,  h,  e,  28
DATA  e,  j,  b,  d,  f,  28
DATA 23, 33, 16, 12, 30
'*************************** DEFINITIONS *************************************
DEFINT A-Z: COLOR 0, 7: CLS : missing$ = "?"    'Edit to change missing$
DIM coeff(1 TO 12, 65 TO 76), total(1 TO 12)
'*************************** TWELVE EQUATIONS ********************************
  FOR eqn = 1 TO 12: IF eqn > 2 THEN y = 7
    DO  READ letter$: letter$ = UCASE$(letter$)
      IF letter$ = "0" OR VAL(letter$) > 0 THEN
        total(eqn) = VAL(letter$): EXIT DO
      END IF
      IF letter$ < "A" OR letter$ = "I" OR letter$ > "K" THEN letter$ = "L"
      ascval = ASC(letter$): coeff(eqn, ascval) = coeff(eqn, ascval) + 1
      IF eqn > 2 THEN y = y + 1: coeff(y, ascval) = coeff(y, ascval) + 1
    LOOP: IF eqn MOD 5 <> 0 THEN PRINT " Eqn"; : PRINT USING "##"; eqn;
    GOSUB PrintOneEqn
  NEXT eqn
source = 1: LOCATE 14, 1
PRINT "PRESS  F1-4,F6-9,F11-12  LetterA-HJK  Tab  ShiftTab  Esc=CLOSE PROGRAM"
'*************************** START INPUT CODE ********************************
DO
  LOCATE source, 7: COLOR 15, 7: PRINT "<S>"; : COLOR 0, 7
  DO: press$ = UCASE$(INKEY$): LOOP UNTIL press$ <> ""
  LOCATE source, 7: PRINT "   ";
'*************************** END INPUT CODE **********************************
  SELECT CASE press$
    CASE CHR$(0) + CHR$(59) TO CHR$(0) + CHR$(67)  ' F1-4,F6-9
      temp = ASC(RIGHT$(press$, 1)): IF temp <> 63 THEN source = temp - 58
    CASE CHR$(0) + CHR$(133), CHR$(0) + CHR$(134)    ' F11-12
      source = ASC(RIGHT$(press$, 1)) - 122
    CASE "A" TO "H", "J", "K"                        ' THE 8 LETTERS
      GOSUB FixSourceEqn
      IF SCREEN(source, 3) = 113 AND coeff(source, ASC(press$)) <> 0 THEN
        LOCATE source, 2: COLOR 15, 7: PRINT " "; press$; " "; : COLOR 0, 7
        LOCATE 16, (ASC(press$) - 64) * 3: PRINT press$; : GOSUB DelLetter
      END IF
    CASE CHR$(9), CHR$(0) + CHR$(15)                 ' TAB & SHIFT+TAB
      FOR eqn = 1 TO 12: LOCATE eqn, 2
        IF press$ <> CHR$(9) OR (eqn > 2 AND eqn MOD 5 <> 0) THEN PRINT "Eqn";
      NEXT eqn
  END SELECT
LOOP UNTIL press$ = CHR$(27): COLOR 7, 0: CLS : END
'***************** ADD THE SUBROUTINES HERE (SEE LISTING 2) ******************
```

Listing 1

The program displays twelve algebraic equations on the screen as shown at the start of Listing 3. The first two equations have only single letters. The puzzle is solved when all the other equations also have single letters. To achieve this, letters are deleted from equations by the subroutine "DelLetter" which uses the statement:

`IF SCREEN (target, 3) = 113 ...etc.`

The ASCII value of letter q is 113 so letters are deleted only from equations in rows beginning with " Eqn".

The equations are solved by pressing function keys, letter keys, Tab and Shift+Tab. When a function key is pressed, the <S> marker moves to show which equation has been selected. F1 selects equation 1, F2 selects equation 2, etc.

When a letter key is pressed, " Eqn" is blanked out at the beginning of the selected equation and replaced by the selected letter. Then the subroutine "DelLetter" deletes the letter from all equations beginning with " Eqn".

When Tab is pressed, " Eqn" is printed at the beginning of the eight equations numbered 3, 4, 6–9, 11 and 12.

When Shift+Tab is pressed, " Eqn" is printed at the beginning of all equations.

Run the program. Listing 3 shows the screen display in stages as the equations are solved. In Stage 1, the two given letters and values have been deleted from the eight equations starting with " Eqn".

The first instruction in Stage is F11 H. This selects equaion 11 and prints “ H ” at he beginning of the equation. The subroutine “DelLetter” eletes H from the other seven quations, which then have only seven letters. Eqn11 is he only one of the eight equaions that contains H and it emains unchanged until Stage . As the other seven equaions and letters are selected, he number of remaining etters decreases until there is one equation with a single etter as shown in Listing 3.

Follow the instructions in Stage 2 in the order given if you want to compare your screen with Listing 3. Otherwise, select equations in any order and select any letter in the equation. To avoid generating large coefficients and totals, choose the shortest available equation and the smallest coefficient.

In Stage 3, Tab prints “ Eqn” in front of the eight equations. F12 J selects equation 12, prints “ J ” in front of it and then the subroutine “DelLetter” deletes J from the other seven equations. When the eight equations and letters have been selected the eight equations are solved as shown in Listing 3. The instructions in Stage 3 can be used in any order so long as only equations with *one letter* are selected.

In Stage 4, Shift+Tab prints “ Eqn” in front of all the equations so that equations 5 and 10 can be solved.

To solve a new puzzle, use QBASIC as an editor to change the DATA. Uppercase or lowercase letters can be used; they are converted to uppercase in the program. Leave the centre of the square blank. The missing letter is displayed as “?” but you can alter this by editing “missing$” in the first line of code.

In Part 2, mouse input will be added and we’ll solve data that doesn’t have a unique solution. ❑

```
'**************************** SUBROUTINES *************************************
PrintOneEqn:
  LOCATE eqn, 10: PRINT SPACE$(50); : LOCATE , 10
  IF eqn MOD 5 = 0 THEN COLOR 7, 0
  FOR ascval = 65 TO 76
    IF coeff(eqn, ascval) <> 0 THEN
      PRINT USING “+###”; coeff(eqn, ascval);
      IF ascval < 76 THEN PRINT CHR$(ascval); ELSE PRINT missing$;
    END IF
  NEXT ascval: PRINT “ =”; : PRINT USING “+###”; total(eqn): COLOR 0, 7
RETURN
Subtract:
  FOR ascval = 65 TO 76
    coeff(eqn, ascval) = coeff(eqn, ascval) - coeff(source, ascval)
  NEXT ascval: total(eqn) = total(eqn) - total(source): GOSUB PrintOneEqn
RETURN
Multiply:
  FOR ascval = 65 TO 76
    coeff(eqn, ascval) = coeff(eqn, ascval) * multiplier
  NEXT ascval: total(eqn) = total(eqn) * multiplier: GOSUB PrintOneEqn
RETURN
Divide:
  FOR ascval = 65 TO 76
    coeff(eqn, ascval) = coeff(eqn, ascval) \ divider
  NEXT ascval: total(eqn) = total(eqn) \ divider: GOSUB PrintOneEqn
RETURN
FixSourceEqn:
  temp = 0: FOR ascval = 65 TO 76
    IF coeff(source, ascval) <> 0 THEN temp = temp + 1
  NEXT ascval: divider = coeff(source, ASC(press$))
  IF temp = 1 AND divider <> 0 THEN
    IF ((total(source) \ divider) * divider = total(source)) THEN
      eqn = source:  GOSUB Divide
      LOCATE 17, (ASC(press$) - 64) * 3 - 1: PRINT total(source)
    END IF
  END IF
  '******* See Part 2 for code to be inserted here **************************
RETURN
DelLetter:
  FOR target = 3 TO 12
    IF SCREEN(target, 3) = 113 AND coeff(target, ASC(press$)) <> 0 THEN
    '***** Cross-multiply eqns and subtract source eqn from target eqn ******
      temp = coeff(source, ASC(press$))
      eqn = source: multiplier = coeff(target, ASC(press$)): GOSUB Multiply
      eqn = target: multiplier = temp: GOSUB Multiply: GOSUB Subtract
    '***** Restore the source eqn ******************************************
      eqn = source: divider = coeff(source, ASC(press$)) \ temp: GOSUB Divide
    END IF
  NEXT target
RETURN
'************************** END OF PART 1 *********************************
```

Listing 2

```
******** START WITH 12 EQUATIONS ********   STAGE 1. Press F1 B  F2 D
 Eqn 1<S>   +1B =  +2                         This deletes B & D from the 8 equations
 Eqn 2      +1D =  +9                          B  1      +1B =  +2
 Eqn 3      +1A  +1B  +1D  +1G  +1J = +18      D  2<S>   +1D =  +9
 Eqn 4      +1B  +1E  +1F  +1H  +1K = +22     Eqn 3      +1A  +1G  +1J =  +7
            +1A  +1C  +2G  +1? = +18          Eqn 4      +1E  +1F  +1H  +1K = +20
 Eqn 6      +1C  +1D  +1E  +1H  +1K = +28                +1A  +1C  +2G  +1? = +18
 Eqn 7      +1B  +1D  +1E  +1F  +1J = +28     Eqn 6      +1C  +1E  +1H  +1K = +19
 Eqn 8      +1C  +2E  +2G = +23               Eqn 7      +1E  +1F  +1J = +17
 Eqn 9      +2D  +1F  +1G  +1J = +33          Eqn 8      +1C  +2E  +2G = +23
            +2B  +1H  +1K  +1? = +16          Eqn 9      +1F  +1G  +1J = +15
 Eqn11      +2A  +1B  +1D  +1H = +12                     +2B  +1H  +1K  +1? = +16
 Eqn12      +1C  +1E  +1F  +1J  +1K = +30     Eqn11      +2A  +1H =  +1
   Equations 1 & 2 are the given values.      Eqn12      +1C  +1E  +1F  +1J  +1K = +30
   The 8 equations 3 4 6-9 11 12                The 8 equations 3 4 6-9 11 12
   have 10 variables A B C D E F G H J K        now have 8 variables A C E F G H J K
****************************************    ****************************************
```

Listing 3

Bruc
Carso

How to set up Cardfiles in Win 9x

Since cardfile.exe is not included in Windows 9x, you will have to copy that file from your Windows 3.x installation to a floppy. Then copy it from the floppy to your Windows 95 or 98 folder. Then do the following to prepare a place for Cardfiles on the Start Menu

- Right-click the Start button. (If I don't say right-click, it is automatically a left-click)
- Click Explore
- Click the file menu at the top of the window
- Click New, then Folder
- Rename the folder from New Folder to Cardfiles. (This folder will later hold only cardfile shortcuts)

Now, to collect *.CRD files into a single exclusive folder:

- Create a folder on the drive of your choice and name it Wincard (or something like that)
- Move all *.crd files into this folder. (Use Ctrl+click to select and then right drag and drop, select Move from the pop-up menu)
- Now Use Ctrl+click to select all *.CRD files in their new location and right-drag them to the new Cardfiles folder on the Start Menu. When you drop them a menu will pop up. Select Create Shortcuts.

Lastly, setting CRD as a file type:

- Double-click My Computer, then click View|Folder Options, the File Types tab, New Type, type "Cardfiles" under Description of type, "crd" under associated extension. Then under actions click New. Then on the pop up "New action" box enter "Open" for the Action and enter "c:\windows\cardfile.exe" for the Application used to perform action.

Reprinted from the January 1999 issue of the I/O Port Newsletter. ❑

```
STAGE 2. Press  F11 H  F3 G  F9 F  F4 E
         Press  F6 C  F8 A  F7 K  F12 J
  B  1     +1B =  +2
  D  2     +1D =  +9
  G  3     +1A  +1G  +1J =  +7
  E  4     -1A  +1E  +1K = +11
           +1A  +1C  +2G  +1? = +18
  C  6     -1A  +1C =  +7
  K  7     +5J  +3K = +38
  A  8     +1A  -2J  -2K = -20
  F  9     -1A  +1F =  +8
           +2B  +1H  +1K  +1? = +16
  H 11     +2A  +1H =  +1
  J 12<S>  +1J =  +4
****************************************
STAGE 3. Press   TAB  and
         Press  F12 J  F7 K  F8 A  F3 G
         Press  F4 E  F6 C  F9 F  F11 H
 This solves the other seven equations.
  B  1     +1B =  +2
  D  2     +1D =  +9
  G  3     +1G =  +3
  E  4     +1E =  +5
           +1A  +1C  +2G  +1? = +18
  C  6     +1C =  +7
  K  7     +1K =  +6
  A  8     +1A =  +0
  F  9     +1F =  +8
           +2B  +1H  +1K  +1? = +16
  H 11<S>  +1H =  +1
  J 12     +1J =  +4
****************************************
STAGE 4. Press  SHIFT+TAB  and
         Press  F8 A  F6 C  F3 G
         Press  F1 B  F11 H  F7 K
 This solves equation 5 and equation 10
  B  1     +1B =  +2
 Eqn 2     +1D =  +9
  G  3     +1G =  +3
 Eqn 4     +1E =  +5
 Eqn       +1? =  +5
  C  6     +1C =  +7
  K  7<S>  +1K =  +6
  A  8     +1A =  +0
 Eqn 9     +1F =  +8
 Eqn       +1? =  +5
  H 11     +1H =  +1
 Eqn12     +1J =  +4
************ PROBLEM SOLVED ************
```

Listing 3 (continued from previous page)

Do you operate a business from home?

Would you like to contribute to the development of a strategy that supports businesses such as yours?

We are currently undertaking research on home-based businesses in Inner Melbourne to be used in the development of a home-based business strategy. We are inviting operators of home-based businesses in the Inner Melbourne Area to contribute to our research by attending a discussion group.

Why not come along and have your say? This is an excellent opportunity to make a valuable contribution to the strategy and to meet and discuss ideas with other home-based business operators.

Interested? Please call Tim Nott at Essential Economics on 9347 5255 to book in to one of the following sessions:

St. Kilda Town Hall, Wednesday, June 23, 7pm
Malvern Town Hall, Tuesday, June 29, 7pm
Richmond Town Hall, Wednesday, June 30, 7pm
North Melbourne Town Hall, Tuesday, July 6, 7pm
Refreshments provided

ESSENTIAL ECONOMICS

Virus alert

SARC has developed detection and repair software for a new worm "Worm.ExploreZip" that potentially can destroy files on a PC. The worm was first discovered and submitted to the Symantec AntiVirus Research Center on June 6, 1999. The worm has since been reported in countries throughout the world.

Propagation

The worm utilises MAPI-capable e-mail programs on Windows systems to propagate itself. The worm e-mails itself as an attachment with the filename "zipped_files.exe". The body of the e-mail message may appear to come from a known e-mail correspondent and contains the following text: "I received your e-mail and I shall send you a reply ASAP. Till then, take a look at the attached zipped docs."

The worm proceeds to copy itself to the c:\windows\system directory with the filename "Explore.exe" and then modifies the WIN.INI file. The program is executed each time Windows starts. The worm then utilises the e-mail client to harvest e-mail addresses to propagate itself. One may notice their e-mail client starts when this occurs.

Damage

In addition, when Worm.ExploreZip is executed, it also searches through the C: to Z: drives of your computer and selects files to destroy by making them 0 bytes long. This can result in irrecoverable data and/or computer system.

Cure

SARC has created a definition to detect this new worm. The virus definitions can be found at: *ftp://ftp.symantec.com/public/english_us_canada/antivirus_definitions/* The definition is also available via LiveUpdate.

For more information please visit the SARC web site: *www.sarc.com* ❑

Georg Adem

Portable computers—maintaining security

It's not just coincidence that a high instance of loss or theft of computer data comes from portable computers, whether laptop or palmtop. Both types of computer are ideal for anyone on the move, whether during the normal course of employment or indeed for totally running a so-called portable business, but it's this portability and use that is the cause of many problems. For a number of reasons this article is written specifically for owners of laptops and concentrates on those computers using the Windows 95/98 operating system, but the principles apply equally to all computers which may hold any sensitive information.

Loss or theft of data can be critical to anyone, but is far more so to someone who has a portable business on their computer, for it can hold entire business records and databases without which it may not even be possible to continue in business. As far as physical security is concerned, I can recommend little beyond the normal precautionary measures. Never leave your computer unattended, even for a few seconds; never leave your computer on view in a parked car, however securely locked; don't leave your computer in an empty hotel room whilst you are out. Buy and use one of the portable alarms designed specifically for laptop computers—one that sets off a very loud electronic siren if moved.

It is the electronic security aspect that is frequently ignored and it is this that I will now concentrate on.

Electronic security can be divided into two main areas. First, with regard to the security of data in respect of loss or damage through either physical or electronic problems—loss or theft, damage or irrecoverable hard disk crashes. Second, with regard to the security of data in respect of possible prying eyes, hacking, the intercepting of Internet communications including e-mail and both covert or overt investigation by government or other official agencies.

you, your computer and its data are the target

Data backup covers the first of these areas. Backup is easy to say, but it's one of the most frequently forgotten or ignored aspects of owning a computer. "It can't or won't happen to me"— if only! If it's going to happen or, should I say, when it happens, you can guarantee it'll be at the most inconvenient and awkward time possible. There are two main parts to backing up computer data. I will cover each briefly because, unless you have a particular desire, there is no need to know the technical ins and outs of what's happening.

The backup of system and operating files can and should be considered separately to the backup of data files. System and operating files are those pieces of software that enable a computer to run and which contain all the personalised information that details exactly what software you've installed and how your computer is customised. Backup for these files or, should I say, backup for the installation and instruction files can easily be stored on a few floppy disks, which you should always carry with you if away from your base. But not in the same case as your computer—if it's lost or stolen, the last thing you'll need is for your backup disks to vanish with it! The backup of the software itself I'll cover in a few moments.

Since this isn't a technical article I won't mention all the files you should back up by name, other than to say you must include such things as your computer registry and many .sys, .bat and .ini files. Windows itself has a facility for creating a Start-up disk—if you haven't already got one, make one now, for it contains a good number of these critical files, although not of the registry itself. You must make a backup of this on its own and I would thoroughly recommend using software called Norton Utilities to do both this and back up the remainder of your critical system files.

Norton Utilities is one of the most useful pieces of utility software you can install. Not only will it maintain a good level of backup of those vital system and operating files but will also constantly monitor and optimise your entire computer system giving additional operating speed, giving you virus protection and early warning of impending problems plus the means to rectify many of these. It also prevents you from accidentally deleting critical files, something I think we've all done at one time or another—but there is a potential security risk involved here, see later for an explanation.

The backup of installed software and data files is the second aspect of securing a computer against loss, theft or physical damage and can easily be achieved by using the backup facility contained within Windows itself. This utility will copy and compress all the data on the hard disk(s) of your computer to either a removable hard disk or other type of backup medium such as a tape drive or perhaps a Jaz or SyQuest drive. It also gives you an easy option to restore it in case of a problem. Here portable computers suffer slightly, for weight reasons it's not always convenient to have backup drives built in, but if you value the data on your computer, ensure that you buy a portable, external backup drive unit—and use it very regularly!

I perform what's called an incremental backup, one that only backs up files that have changed since the last full backup, every single day after I finish using either of my computers. It only takes a few minutes and once set in motion is totally automatic—on a laptop a good time do it is whilst you recharge the batteries. The backup utility within Windows will, of course, copy all the system and operating files I previously mentioned; however, there are times when it can be both valuable and offer additional peace of mind to have both. For the sake of a few floppy disks and a few minutes of your time, do it.

If you travel extensively and are away for extended periods of time it's worthwhile considering making a master backup copy of all your installed software on a rewriteable CD-ROM and carrying that, along with your CD-ROM boot disk, with you (but not with your computer!) on your travels. This will ensure that whatever happens you will always be able to reinstall the entire operating system and all software in one easy process, even if you have to buy/borrow a new computer. Incidentally, if you do ever have a loan machine while yours is being repaired, you must securely delete every single file you put on its hard disk before returning it!

As far as data files are concerned, use either your removable backup drive or consider uploading all the backup data, suitably encrypted (next section) and compressed (as a Zip file) to a non-public directory on your Internet web site. You haven't got one? Seriously consider it, for the sake of a few dollars a month you can have your own home page to promote your business and/or just store whatever files you wish well out of harm's way. With Internet-based backup as long as you have a phone, a modem and, of course, Internet access, you will be able to recover critical data files wherever you are in the world. It may mean transferring some large files, but has a great deal to commend it. There are also a number of purpose-designed Internet storage facilities for keeping such files if you don't have or can't use your own web site; possibly the best known of these is "FreeDrive".

The security and privacy of your data files is the other area of concern and one that should be of interest to anyone who uses a computer for anything other than the most trivial of purposes. In today's age there are many people and organisations that would dearly love to get their hands on your data; the nosy or the malicious, computer hackers, business competitors and increasingly government and other official agencies. It's beyond the scope of this article to do more than state that this is so, but there are a multitude of well- documented instances occurring every single day in virtually every country of the world — believe me, I earn part of my living from protecting people from such.

Many people will say, "I have nothing to hide, why should I be concerned?" Would those same people give anyone who cared to ask, full details of their private banking and other financial information, copies of their private mai and other correspondence, let anyone have access to their confidential busines information and data? I think not. In its simplest form, electronic security can be considered the equivalent of keeping confidential information in a safe whilst on the computer and contained in a securely sealed envelope when sending it via the Internet.

Computers are not secure! This should be emphasised right from the start. No operating system will prevent a determined hacker or indeed anyone with computer knowledge from getting total and unrestricted access to everything on a hard disk(s). You may have log-on passwords, screen saver passwords, passworded access to word processing files, hidden files and directories, but to someone who has the knowledge these are but a few minutes' work to bypass. Use them by all means; they will prevent casual passersby, business colleagues or nosy family members from pressing a few keys to see what's there, but beyond that, I'm afraid not. Windows operating systems, despite repeated assurances from Microsoft, are not secure, especially if you use the Internet. There are many back doors by which someone sitting, perhaps, on the other side of the world can get whatever information they require off your hard disk—without you ever being any the wiser until it's used against you. Again it's beyond the scope of this article to go into the technicalities of this but, as before, believe me when I say it's so.

So how do you secure your data? Doing this falls into three distinct and equally important categories. Firstly, you must ensure that no traces of old or unencrypted data remain on the computer for later recovery and that all temporary files written to disk whilst the computer is in use are removed (sanitising and wiping). Secondly, you must secure data physically present in a computer. Finally, you must secure data and e-mail being sent via the Internet.

Sanitising data

Sanitising your computer's hard disk is of vital importance if you handle sensitive commercial data in any shape or form, or if you are involved in any business which may be considered as nwelcome (or even illegal) by your overnment such as active membership n a suspect organisation or owning or nanaging offshore companies or bank ccounts. Here I must first explain a ittle about what happens in a computer vhen it's used, so please bear with me. t's important to understand how this vorks and I will keep it simple, ossibly even over-simple, for those vith no computer knowledge.

Vhen new, a hard disk has nothing vritten on it—"written" in the sense of he magnetic zeros and ones that ompose the binary code computers ise for handling and storing data. But nce data has been stored it leaves a rail that is not always removed, even vhen the data file itself is finished with r deleted. It's important to understand hat deleting a file does not actually emove it, it simply removes the index howing where that file is located on he disks surface. Even formatting a disk won't remove data, in essence it simply removes the old index and lays down a new, clean one whilst generally tidying up the rest of the disk in readiness for new data. Much confidential data has been smuggled out of companies on seemingly blank disks, only to be recovered later. Traces of original files will still remain even after they have apparently been written over several times and there are several commercially available forensic software programs such as Expert Witness designed specifically to search disks sector by sector for such old, overwritten or deleted data and importantly, recover it to evidence files. Even Windows itself and Norton Utilities have undelete and unformat facilities built in. This is why whenever the police, Inland Revenue, Customs and Excise etc, raid a premises, computers are always removed for examination—it may only need a few traces of data to prove a link between you, your computer and whatever activity is considered suspect.

In addition to stored data files or traces of data files previously written to the hard disk remaining there for perhaps months or even years after the original files have been deleted, there are two further places where information can be stored. The first of these is the system swap file— *win386.swp* on your "C:" drive. When a computer is working, its memory (RAM) cannot always hold all the data needed to perform the task in hand, so it allocates an area of the hard disk to use as a temporary store. This is the swap file and it can represent as much as 10 per cent or more of the total hard disk capacity. As with files stored directly to disk, temporary files written to the swap file can remain there long after being used, again perhaps for months or even years.

The second place where files or shortcuts to files are stored are in Windows *temp*, *history*, *recent* and *spool* directories, plus the equivalents contained in certain other installed software, such as *ini* files. Log files present yet another place where details of your computer activities are stored—disable their use if you can, move the files and redefine their paths to secure directories if you can't. The name of a directory, file or its shortcut can, of course, sometimes be as incriminating as the contents of the file itself—don't call a directory "Offshore Accounts" for example! All these can represent huge security risks where data is concerned, much of which can be recovered within minutes using even the most basic of forensic software.

Fortunately, help is at hand in two ways. Firstly, software such as the aptly named Shredder is available. This type of security software has a triple action. It will minutely examine a hard disk (or indeed any disk) for all traces of deleted files or old file fragments; it will then delete those files themselves together with their index tracks. It will then go on to overwrite the places where the files or fragments and their indexes were stored with several passes of random characters (flushing). Subsequently it will constantly monitor all temporary files written to disk during the use of a computer and will securely delete them as soon as they are no longer required. Finally, it will totally delete all data stored in the swap file and overwrite the entire file with several passes of random characters each time the computer is shut down. Shredder can slow down the computer slightly, especially when working with documents which swap a lot of data about, but on today's 400 MHz+ machines this hardly matters.

All this is enough to defeat even the most thorough forensic examination if carried out rigorously enough (this can be time-consuming when you first set the system up, but do it and keep doing it). You would be amazed at just how many temporary and unnecessary files are created in seemingly simple activities, simply opening a document in your word processor, making a few amendments then saving the file again can create upwards of a dozen different temporary files of different types. All must be securely deleted to ensure safety.

Trying not to labour the point but as an example to reinforce this vital point, I have just closed this document (using Word 97), reopened it, made half a dozen small changes, saved it and then closed it again, all within 60 seconds.

nmit

www.nmit.vic.edu.au

CISCO SYSTEMS

Certified CISCO Network Associate (CCNA) - Training

Northern Melbourne Institute of TAFE is pleased to be associated with Cisco Systems and has been appointed a Cisco Network Academy.

The Certified Cisco Network Associate Training program will be conducted at our Heidelberg campus commencing:

- **18 August 1999, 6-10pm**
- **22 July 1999, 9am-4pm**
- **21 August 1999, 9am-4pm**

This program consists of four modules each of 40 hours duration (40 weeks at 4 hours per week).

CCNA is an internationally recognised qualification that will empower associates to enter employment in this growth industry of Networking technology.

For details phone:

Enrolments: (03) 9269 1483
Enquiries: (03) 9269 1477

bec
Business Enterprise Centre

Northern Melbourne Institute of TAFE

The following files were all written during this time:

E:\Documents\Articles\Computer_Security.doc (the article itself)
C:\Program Files\Microsoft Office\Office\~$custom.dic
C:\Windows\Recent\Computer_Security.doc.lnk
C:\Windows\Temp\~DF4913.tmp
C:\Windows\Temp\~DF4C21.tmp
C:\Windows\Temp\~DF4E49.tmp
C:\Windows\Temp\~WRA00003.wbk
D:\Templates\~$Normal.dot

If I now send the article to my printer (HP LaserJet), the following extra files are written:

C:\Windows\Temp\~EMFxxxx.tmp (plus a further 11 such files, where xxxx is a variable number)
C:\Windows\Spool\Printers\00002.spl
C:\Windows\Spool\Printers\00002.shd

And finally, if I send the article as a fax (using WinFax Pro), the following extra files are written:

C:\Windows\Temp\~EMFxxxx.tmp (plus a further 13 such files, where xxxx is a variable number)
C:\Windows\WFXDRV01.tmp
C:\Windows\WFXSEM01.tmp
C:\Program Files\Symantec\Winfax\Data3090001.fxd
C:\Program Files\Symantec\Winfax\Data3091TMP.tmp

And as the log files automatically delete, a further nine *.tmp files are created!

You get the picture? If this was, say, a letter to an offshore bank about an account or perhaps had criminal content and I hadn't the appropriate security software installed, even a cursory check of my computer could produce enough evidence to hang me!

Secondly, secure deletion software such as Scorch or BC Wipe is available to take over where the normal Windows delete leaves off. Instead of simply deleting the index, this software deletes both the index and the data itself, then overwrites the spaces left with several passes of random characters. Very much as Shredder does, but on a controlled file by file basis rather than automatically in the background. As I keep saying, buy it, install it, use it.

Encryption is the same basic principle used in the last two areas of securing data, but it is implemented differently in each case. Encryption is a complex matter and was once thought of in the same breath as international spy rings and high level espionage, but no longer, it is very real and very important and is used by millions around the world on a daily basis. At its most basic, encryption is simply the coding of information to make it unreadable to anyone who doesn't know the key to read the code.

Needless to say, with the advent of today's powerful computers, the codes (or algorithms) and the keys used to encrypt/decrypt information are highly sophisticated and are all but impossible to crack. Despite determined efforts by the US government to prevent it, good encryption software that cannot be broken, even by the world's most powerful computers, is readily available to anyone and is so simple to use that even a child can do so.

Securing data

For ease of use and practicality you will need software that will allow what is termed *transparent encryption*. In other words, once you have installed the software, set up your encryption keys and passphrases—and this is a somewhat technical subject in its own right—and moved your sensitive data to the encrypted drives or directories (see next paragraph), the software must allow you to both write to and read from the encrypted files and directories without you even being aware that encryption/decryption is taking place. There must be minimal slowing of your computer, yet once locked (and in a panic— sudden intrusion—you must be able to do this with a couple of keystrokes), security must be absolute. Can this be achieved? The answer is a most definite "yes", software such as BestCrypt will let you do all this and more with a minimum of technical knowledge. Buy it, install it and use it!

Windows itself together with many other pieces of software will try to place data files in predefined default locations on your hard disk. As just one example, Microsoft Outlook will try to locate your incoming and outgoing e-mails, address book data, calendar etc, all within the C:\Windows directory. Always, and I mean always, check the paths and directories where all your data files are located and, if necessary, redefine those paths within the software to locate such information in one of your encrypted directories or drives! Sometimes this is easy, Word, for example lets you do this from within Tools\Options\File Locations, but other times you do need knowledge of how your software works. If all else fails, simply move the entire default directory to a secure location, ignore any warnings (but ensure you have a current backup and can remember where the file came from) then launch the program. In most instances when a message tells you it can't find the data file or directory you've moved, you are offered the option of browsing to the new location yourself. Do so and the software should remember it. If all else fails, locate the entire software package on an encrypted drive.

Securing data sent over the Internet

Encryption is, of course, the answer here as well, but although encryption of all types follows the same basic pattern, that used for e-mail and file transfer is different inasmuch as it's not just you that's both encrypting data then decrypting it later. The recipient of your message, perhaps living on the other side of the world, must be able to decrypt messages sent to him and you must be able to do the same for messages received. Herein lies what can appear to be a problem; how do you send the key to open encrypted messages without someone intercepting it and subsequently using that key to decrypt intercepted messages?

Before I explain, a word about e-mail and Internet security generally. In a word this can be described as non-existent. All information passing via the Internet, whether Web pages, transferred files or e-mail must pass between the computers being used to send and receive, several different international telephone companies, an Internet service provider and perhaps a dozen different other computers on route. All messages and files are logged at each point along that route and many, if not all, Internet service providers are now legally obliged to store copies of the actual data itself (and routinely make it available to police, government and other agencies without warrant). The scope for both unauthorised and authorised interception and tapping is huge and is exploited to its utmost. Believe me, sending anything over the Internet is akin to sending a letter through the post without an envelope, knowing that perhaps dozens of people can read it and will keep copies!

Your Internet browser, whether Internet Explorer or Netscape Navigator can be another security nightmare! As with so much of this subject, it can be very technical, but in a few words: turn off ll cookies (small software programs esigned to exchange information etween your computer and some nternet Web sites) and delete cookie iles. Switch off log and history files both leave a total record of everyvhere you've been on the Internet ogether with details of and shortcuts o, all the files you've downloaded). witch off ActiveX (OK, as with no ookie use, you might not be able to iew a few sites, but the security risks re just too high) and make sure that all he optional security warning messages re set to appear when needed. It can e a pain, but it gives you total control f what you view and download, not our computer. Finally, if you must etain all your temporary Internet files cache), ensure that it's located within n encrypted directory. A far better pproach to my mind is to install an ff-line cache reader such as Netscape Cache Explorer or MSIE Cache Explorer and set your browser to empty the cache each time you close the program. But after finishing your on-line session and before you close your browser, use the cache explorers save as facility to save those pages or complete sites you wish to retain as folders within individual encrypted directories. Before going back to encryption, I'll briefly and simply mention what are known as "Proxy" servers; these are (usually) remote computers through which all your Internet browsing is carried out. In other words, they represent the first link in the chain between your own computer and the outside world and they operate by filtering out the hidden header information which identifies you and which is contained in the data stream from you and your ISP. To anyone trying to reverse-trace your browsing, it appears to originate with the proxy itself. Possibly the two best known free public proxy servers are "The Anonymizer" and "Lucent Personal Web Assistant".

But back to the subject. Enter what is called public key encryption. Without any technical details, when encryption software such as PGP (Pretty Good Privacy), the de facto standard for encrypting Internet-based communications, is installed, the unique key to the code used is split into two halves. One half, the secret key, always remains on your computer and is used to decrypt messages previously encrypted with the other half, the matching public key. Individually they can only be used for half the process, so it is perfectly safe to issue your public key to anyone with whom you wish to communicate securely. They can use your public key to encrypt a message to you, but only you, with your secret key, can decrypt and read it. And vice-versa of course, you can encrypt messages to anyone sending you their public key, but only they can decrypt them. Anyone intercepting any public key in transit can do nothing with it, nothing at all.

Confused? It is a difficult subject and public key encryption can be confusing to start with, but perhaps an analogy would be your telephone number—you can give this out publicly so anyone can ring you, but it doesn't mean that anyone who has your number can answer your phone and listen to your conversation. The same with PGP, anyone with your public key can send you an encrypted message, but only you can decrypt it. Difficult to install and use? No! The latest versions of PGP are easy to install, key generation is automatic and they now link automatically to the most common e-mail software such as Exchange, Outlook, Outlook Express, Eudora and Claris E-mailer, so totally secure e-mail can be yours at the click of a mouse. As before, get it, install it and use it!

Anyone who is more concerned about the security and privacy of their e-mail, or those who wish to be able to send messages anonymously (at least to the outside world and to anyone trying to investigate them) there are a number of Internet-based sites and resident computer software like "Private Idaho" which use what are called "remailers". In basic terms these are servers located around the world through which e-mail is chained, being sent from one to the next to the next and so on to its final destination. At each remailer the header codes from the previous stage are removed and new ones inserted, making it virtually impossible for e-mail to be traced; random time delays (latency) inserted by each remailer between receiving and resending messages adds to the security, as does the almost mandatory use of PGP encryption.

In summary. Whilst computer security, especially that of portable computers, is perhaps not at the fore- front of our thoughts for reasons of both the "it won't happen to me" syndrome and through perceived complexity, it is—or should be—a vital part of our everyday life. You, your computer and its data are the target of many unauthorised and indeed increasingly authorised, attacks in order to monitor and control you, your thoughts and your finances. To maintain privacy in an increasingly unfriendly and unfree world, computer security is of vital importance. Once considered, it is not a difficult matter to achieve, but it does require certain knowledge, a degree of planning and careful implementation. It can be time-consuming, initially at least until you are sure that your computer holds only encrypted data and has been wiped clean of all traces of old, unwanted information, but from there on, it's simply a matter of following and sticking to routine.

In this article I've tried to outline the basics, perhaps even a bit more than the basics, of computer security in the hope that you will be safer and more confident that what's yours, stays yours, despite the worst the world (and its governments) may throw at you, as far as your computer is concerned at least. There is a great deal more to this subject, matters such as using proxy servers, anonymous remailers and so on, but that's for another day. For your own sake, don't just read this, think "that's interesting", then forget it! Put it all into practice; the day may come sooner than you expect when you wish you had, but of course by then it'll be far, far too late.

Copyright © Financial Privacy Consultants, Dr. Georg Adem
http://www2.privacy-consultants.com/
kounselor@writeme.com ❑

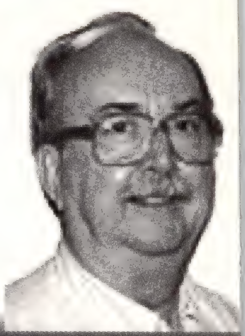
PC SUPPORT and TUITION SERVICES

- **Personalised Computer tuition, to suit your needs**
- **Computer Problems Solved**
- **Ages 9 to 99 catered for**
- **Small Office Networking Solutions**

For PCs using:
DOS Windows 3.x Windows 95
***Discounts for Melb PC members**

Peter Selig
Phone (03) 9527-8805 Mob 0419-335-221
E-mail pfselig@melbpc.org.au

Brian K Lewis, PhD



Recovering from hard drive failure

One of the most common problems that I run into is a failing or failed hard drive. All too often the owner has not been conscientious about keeping the data and programs backed up. I have seen situations where the computer is in Florida and the original application disks are somewhere up North. It is very difficult to restore programs if you don't have the original disks or don't have a complete backup. Any backup should include the Registry files, otherwise, you will have to re-install all of your application software. Just keep that in mind as we go through some of the things you may have to do when your hard drive starts to give you error messages or simply won't boot into Windows or even into Safe Mode.

What types of error messages can you expect when your drive starts to fail? You may simply get a message that a file can't be found or it can't be loaded because it is damaged. Or, you may get a "sector not found" error message. The worst case may be when the computer tells you your hard drive is not bootable. In the first two cases, if you can still run Windows, try running SCANDISK and use the "Thorough" setting to check the surface of the hard disk.

You may find that one or more sectors are bad and need to be marked so they can no longer be used for data storage. SCANDISK will attempt to move the data to a safe location. If you can't run Windows in Normal mode, but it will boot into Safe mode, then you can still run SCANDISK to check the drive condition.

For those who have never used SCANDISK, you click the Start button and then select Run. The command to be typed in the run box is "SCANDISK", without the quotes.

If you can no longer get Windows to run in either Normal mode or Safe mode, then you need to use your Windows start-up disk. You did, of course, make a start-up disk when you installed Windows. If you haven't made one, do it now, before you need it. Go to the Control Panel, click "Add New Software" and in the next window, click on the Startup Disk tab. In Windows 98 (Win98) this will prepare a disk with diagnostic software, including SCANDISK. Now, when you boot with this floppy disk, you can run SCANDISK and check the drive surface.

If you are still using Windows 95 (Win95), then you can make a Startup disk the same way. However, it will not include all the files you need. Microsoft has provided software to help you recover from disk problems. The Emergency Recovery Utility (ERU) is part of the Win95 Resource Kit, and is also provided on the Win 95 CD-ROM. You can find it in the other\misc\eru folder. I suggest moving this to the backup folder in the Windows folder on your hard drive. When you run the ERU, save the files on a floppy disk for the time when you will need it.

With either Win98 or Win95 you want to run SCANDISK after you have booted your computer. If SCANDISK repairs your drive so that you can again run Windows or your application, you are home free for the moment. However, in some instances you will need to replace damaged files. How you replace them depends in large part whether they were part of Windows or another software application. Those that belong to another application can probably be restored from your backup.

No backup? Then you will need to re-install the application. Suppose, as can happen, the damaged files were in the Windows folder and you had to wipe out all the files in that particular location. That would include all the system files, the library files (DLLs) for many applications, hardware device drivers, etc. In this case, if you don't have a backup, you would have to reinstall Windows and all of your applications. Even if the application files weren't damaged, their re-installation is necessary to place the necessary files in the Windows and System folders. This will also add the necessary references to the application in the Registry. Believe me, having a complete, current backup can save you hours of work.

maintaining a current backup of your hard drive should be part of your routine

This discussion has assumed that the problem on the hard disk is relatively minor. Hard disks can develop small problems and continue functioning for long afterwards. In other cases, once the surface starts to fail, it rapidly becomes a progressive disease leading to total failure of the drive. If the damaged areas do not involve the boot sectors, you will have a little time to ensure that you have a current backup. If it involves the boot sectors, you will get a message telling you that the drive is not bootable or system files were not found —please insert a bootable disk. Now you need that Windows Startup disk.

Once you have booted from the tartup disk, next run SCANDISK. To eplace the system files, you run the YS program. The SYS program copies he IO.SYS, MSDOS.SYS and COMMAND.COM files to the hard drive. The first two have to be written to the ystem area of the hard drive, usually rack zero. If this area is damaged, you will get an error message. The SYS program is automatically included on he Win98 Startup disk. You may have o add it to your Win95 Startup disk.

If the SYS program doesn't successfully replace your boot file (system files), your next step is usually to replace the hard drive. You can try to correct the problem by reformatting the hard drive. However, in my experience, once the boot sectors are damaged, the drive is usually unusable as a primary drive.

It can sometimes be used as a secondary drive providing the remaining surface is not damaged or failing. SCANDISK can help you determine that.

In some cases, SCANDISK will start reporting sector problems and the number of bad sectors will rapidly increase day by day. When this starts happening, you should be preparing to replace the hard drive. There are some utilities, such as "Lost & Found" that can help you recover files from a failing drive. However, they can't prevent the failure from continuing. So, this is just another reason to maintain a regular system of backing up your drive.

How you back up your drive depends on how much effort you are willing to put into the recovery process. If you are willing to reinstall all of your application software, then you only need to back up your data files. If you have updated some applications with downloads from the Internet, then you may not want to reinstall the original application. In that case you need the downloaded file saved on some other media so it can be installed. The only other option is to have a full backup of your entire hard disk, including the Registry files. You will still have to make the hard drive bootable, which may mean installing Windows again. Most backup software can't be run from DOS or a floppy. They will run only under Windows. After you reinstall Windows and start the restore process, you will receive messages that such and such a file can't be restored because it is in use. This refers to the library files and EXE files that Windows loads so it can run. Don't let that bother you, just continue the restore process. If your backup is recent enough, then your Registry will be accurate enough that you won't have to restore your applications. Maintaining a current backup of your hard drive, or several recent backups, should be part of your routine maintenance of your computer system. It is, by far, the best tool to help you recover from a hard drive failure.

About the author

Dr Lewis, a former university and medical school professor, is a computer consultant doing instruction, hardware/software services and system upgrades. He is a member of the Sarasota Personal Computer Users Group, Inc. He can be reached via e-mail at *bklew@worldnet.att*

Copyright © 1999. Reprinted with permission from the May 1999 issue of the *Sarasota PC Monitor*, the official monthly publication of the Sarasota Personal Computer Users Group, Inc. The Sarasota Personal Computer Users Group, Inc. has 1,300+ members and was established in 1982. ❑

Is your PC sick or slow? We can fix it for you fast because we are the PC repair professionals.

NEED URGENT HELP? CALL FOR OUR PC REPAIR EXPRESS!

☑ **Expert PC repairs. Your choice of 2 speeds… instant express or fast 48 hour service!**

☑ **Upgrades to Pentium power (and to 486!)**

— 486 to Pentium core (motherboard, RAM, video): today's computer.
— Hard disk upgrade and data transfer: Gigabyte storage, painlessly.
— Multimedia kits: today's starting point; tomorrow's necessity.
— RAM: more RAM means many programs run faster; you can run more programs at once.
— 286/386 to 486! Economy; guaranteed 2ndhand parts. Keep the old favourite relevant.

☑ **Workshop or on-site repairs; your choice.**

☑ **Monitor, printer and other peripheral repairs.**

WE ARE OFFICIAL MELB PC SUPPORTERS: Show your Melb PC card for special 10% members' discount on selected services.

Bayside PC Services

96 Nepean Highway, Mentone 3194 FREE FAQ help: www.baypc.com.au

Call NOW about fully guaranteed repairs: ☎ 9585 1645

REAL SMALL BUSINESS NETWORK SOLUTIONS — NOVELL & NT — DESIGN, IMPLEMENTATION & TRAINING

Why not join Melb PC?

Melb PC is many things to many people, after all it is the second largest user group in the world! Although each of our thousands of members has a unique experience of Melb PC, we have a common belief in the value of computer users helping other computer users.

Helping them do what?

The list is almost endless — some of the things Melb PC is best known for are:

- **Supporting**
  Practical and emotional support. Whether you're trying to install a new operating system, hard drive, word processor or flight simulator, someone at Melb PC has been there and done that. You may find a whole group of people who meet regularly to discuss the very problem you are experiencing.
- **Meeting**
  One of the ways Melb PC helps its members support each other is through meetings. Within its diverse membership you'll find novices, old hands and everyone in between. Whatever you're trying to do, there's someone to help you. As a member of Melb PC, you'll also have the opportunity to meet industry leaders and technical experts representing major software and hardware vendors. They'll answer your questions and demonstrate the latest developments in computing technology, often before the general public gets the news.
- **Teaching, learning and enjoying**
  As an organisation, Melb PC with its range of skills and knowledge provides a range of formal and informal opportunities for teaching and learning new computing skills.

So whatever you use a computer for, Melb PC helps you enjoy it more!

How?

Melb PC's greatest strength is its membership. With more than 11,500 members, it is the world's second largest PC User Group. It was founded in 1984, and is still run by and for its members, people like you.

Although Melb PC employs some staff, most functions from writing and editing the group's magazine, to maintaining the group's online services, organising monthly meetings, etc, are performed by volunteers.

Who belongs to Melb PC?

Anyone who uses a computer at work, school or play. Parents, children, grandparents and singles. Beginners, old hands, youngsters, oldsters and inbetweensters. Teachers, students, business operators, secretaries, CEOs, doctors, lawyers, plumbers, electricians, builders, pilots, writers, editors, engineers, journalists, accountants and more!

You name it, Melb PC's members do it. Your membership is your key to a vast store of knowledge, an invaluable information resource and help in many fields.

Your benefits of membership come to you in many ways throughout the year:

- ***PC Update***
  Eleven times a year, Melb PC's magazine, *PC Update* brings you news about computer hardware, software and how your fellow members use these to achieve their goals. You'll read about members' experiences, learning from their successes and mistakes. Each issue also covers the group's regular activities and any special "members only" events or offers the group has arranged. Your yearly membership, which includes *PC Update* delivered to you, costs about as much as it would to buy a year's issues over the counter.
- **Computer First-Aid and Dial Help**
  Free vendor support is scarcer every year. It's no wonder many members find these two services, alone, worth the cost of membership. These are "members only" services. Experienced volunteers share their time and knowledge to help fellow members work through problems. Just knowing there is someone to call gives some members the courage to try something new.
- **Internet Access**
  The Internet is the foundation of the communication revolution and the key to success in the new millennium. Melb PC pioneered the provision of affordable Internet access and remains an acknowledged leader offering very competitively priced Internet access to members.
  The fast and reliable service provides connection speeds up to 56 kbps, with preconfigured software for ease of installation, helpful technical support, and is constantly evolving in pace with emerging technology.
- **Training**
  Whether you're an absolute beginner planning to buy your first computer or a power user looking to update your skills, Melb PC has a training course for you. Most courses are hands on, conducted in Melb PC's own, modern, Pentium-equipped training centre. These courses are "members only" so they are cost-competitive compared to similar courses elsewhere. Each month *PC Update* contains details o forthcoming courses.
- **Meetings**
  Our main monthly meetings include presentations by leading computer hardware and software vendors to Melb PC members and their guests.
  Speakers have included industry giants such as Bill Gates, Philippe Kahn and Gordon Eubanks, as well as the CEOs and senior managers from most major Australian and overseas vendors. Members can win software worth thousands of dollars at these meetings.
  The monthly meeting provides an opportunity to ask questions and get to know your fellow members better. With an average of 400 members attending, the meetings are great for exploring your fellow members' problem-solving skills.
- **SIGs**
  If big groups aren't for you, or if you have a special interest, Special Interest Groups (SIGs) may be your thing. A SIG can deal with any topic, from a particular application to hardware, programming, or how to get the best from your equipment. Check a current issue of *PC Update* for meeting dates, locations, contact information and information about future events.
- **Bulletin Board**
  For members not quite ready for the Internet, Melb PC operates a free, multiline bulletin board system (BBS). The BBS has a large collection of shareware and freeware programs for members to download. Members also use the BBS to send messages to other members.
- **Reference and Software Libraries**
  Books and magazines are available for members to browse or borrow. An extensive range of shareware and freeware programs are reviewed in *PC Update* and are available on disk from the shareware library.

Whether you are an individual, family or company, one thing is clear. If you want to get the most from your computing experience, a Melb PC membership is a must. ❑

Internet access application form

Instructions

- Please **read** the entire form. It may be photocopied.
- Complete **every** field else it might be returned to you. Each field has a purpose, which includes updating our database.
- Enclose a cheque or authorise a charge against your credit card for the requisite amount. Send the form with payment to

  Melbourne PC User Group
  PO Box 283
  South Melbourne VIC 3205

Description of service

- **General.** The Melbourne PC User Group Inc A0003293V (Melb PC) Internet Service network (the Network) is a private telecommunications network owned and operated by Melb PC for its members. It is administered by the Internet Subcommittee (the Subcommittee) as a subscriber-funded service.
- **Function of the Melb PC Network.** The primary function of the Network is to support the free transfer of information to and from Melb PC members, subject to the terms of our Acceptable Use Policy.
- **Standard Service.** SLIP/PPP accounts.
- **Features:**
  - Electronic Mail.
  - We also provide access to other services that are found on the Internet but they are not under our control.
- **Charges**. Annual fee $140, subject to change from time to time.
- **Limits and Quotas.** Up to 120 minutes access per day (non-cumulative). A bank of modems is made available with a time limit of 30 minutes for the benefit of users who need to check their mail and get off quickly. The Mail quota is 4 MB. Excess mail may be deleted.
- **Access Software.** You will need to acquire and configure suitable software from our Shareware library or other resources.
- **Accounts.** Accounts are issued only to individuals, not company names. Melb PC may reject an application without stating a reason.
- **Support.** Volunteers offer their help in local newsgroups, via our free Bulletin Board Service, or by telephone.
- **Training.** Melb PC offers training courses.
- **Duration.** The subscription to the Network is for one year from the date of acceptance. It automatically terminates upon expiry of membership of Melb PC.
- **Acknowledgment.** Successful applicants will include individuals whose forms are correctly filled out and whose funds have been transferred to our bank account.
- **Net Etiquette.** Melb PC endorses adherence to ("net etiquette" or "netiquette") as deemed by the subcommittee from time to time.

Internet access agreement

Definitions

"Melb PC" means The Melbourne PC User Group Incorporated A0003283V or its assignee;
"the subscriber" means the Melb PC member making this application;
"family subscriber" refers to an existing Melb PC Family Member, or a member of the family residing at the same address who applies for Melb PC Family Membership at this same time, paying the additional $10 Melb PC membership in addition to the Internet subscription;
"Internet access" means access to the World Wide Web, Internet e-mail and any additional Internet facilities Melb PC may offer to its members from time to time, but unless Melb PC agrees otherwise does not include supply or maintenance of the subscriber's equipment, software or telephone line, or technical support;
"subscription period" means the period in advance for which the subscriber has paid in full, being one of the periods of subscription offered by Melb PC from time to time;

1. The subscriber asks Melb PC to provide Internet access and Melb PC agrees to do so.
2. This agreement starts when an authorised officer of Melb PC has executed it and Melb PC has received cleared payment for the subscription period.
3. Subject to the early termination clauses of this agreement and to clause 4, this agreement continues until the end of the subscription period.
4. If Melb PC and the subscriber renew this agreement for a further subscription period, this agreement applies to the renewed subscription period unless the parties agree otherwise in writing.
5. The subscriber acknowledges that:
   a. Continuity and speed of the Internet access depends on a wide range of factors, many of which are beyond the control of Melb PC;
   b. Melb PC has no control over the accuracy or appropriateness of any information on the Internet;
   c. Melb PC is not responsible for any material available on the Internet;
   d. The subscriber's Internet access may be interrupted by equipment failure, the need for routine maintenance, peak demand and so on;
   e. Melb PC cannot guarantee that the subscriber will be able to secure access at any given time, or that fluctuations in demand by other subscribers will not prevent the subscriber from using the full amount of the maximum daily time allowance on any given day.
6. Subject to matters of the kind referred to in the previous clause and to the subscriber's access limits, Melb PC will use its best endeavours to keep Internet access available continuously and to allow the subscriber to have access for the current daily time allowance from time to time.
7. The subscriber indemnifies Melb PC against any liability, claim, action, suit, demand, loss, cost or expense arising out of or in any way connected with this agreement or Internet access, including any negligence by Melb PC, its servants or agents.
8. The subscriber will pay fees according to Melb PC's standard pricing list from time to time, and a copy of the list certified by an officer of Melb PC is conclusive evidence of the prices applicable at any time.
9. Melb PC may make rules for the use by the subscriber of Internet access, including rules as to online time limits, transmission volume limits, excess usage fees, terms of payment and any other matter at all that Melb PC considers desirable, provided that there shall be no reduction in the access time of the subscriber during any period for which the subscriber has paid in advance unless the service provided by Melb PC has been or is to be enhanced so as to make up for any lost value. Melb PC may alter the rules on not less than fourteen days notice to the subscriber. A copy of the rules certified by an officer of Melb PC is conclusive evidence of the rules applicable at any time. The rules from time to time will apply as if they were set out in full as terms of this agreement.
10. The subscriber must not deliberately or recklessly do anything that damages Melb PC's equipment, software, setup or services.
11. The subscriber must not use Internet access to annoy, harass or harm other Internet users.
12. The subscriber must not use Internet access for any unlawful purpose or in any unlawful manner.
13. The subscriber will keep safe and confidential any access numbers, codes or passwords allotted to them by Melb PC and notify Melb PC without delay of any disclosure of those things.
14. Melb PC may terminate the subscriber's Internet access immediately if the subscriber breaches this agreement or the rules, or fails to promptly pay any money owed to Melb PC, or ceases to be a member of Melb PC.
15. Subject to the previous clause, either party may terminate this agreement by 14 days' notice to the other save that Melb PC must not terminate this agreement while the subscriber has credit for advance payment of fees without refunding a pro rata part of those fees or making alternative Internet access arrangements for the subscriber, and termination by the subscriber does not affect any debt owed to Melb PC at the time of termination.
16. Melb PC may delete without notice any material found on its storage disks that is unauthorised, unlawful, obscene, dangerous, excessive in volume, uncollected for an excessive period, or in an unauthorised place.

17. Melb PC may delete without notice any material found on its storage disks without giving any reason for doing so.
18. Melb PC may make and keep any record it requires for the purpose of this agreement or the rules or for the operation of its services.
19. The Description of Service, Internet Access Agreement, and the services as described on this application form constiture the entire agreement between the parties, and neither of them relies on any term, condition, warranty, collateral contract, representation or promise not set out in those parts of this application forms.
20. Any notice given about any matter concerning this agreement may be given by fax, e-mail or post at the last fax number, e-mail or postal address notified to the sender and is deemed to have been received at the time when it would have arrived in the ordinary course of the relevant type of transmission.
21. The subscriber must not transfer, sell or share Internet access rights, or allow the account to be used by any other person, other than those Melb PC Family Members who are listed on this application.
22. The user's last name must be displayed in all mail and news messages. The user's first name or initials may be displayed as desired.
23. Commercial traffic, in the form of private messages and advertisements in newsgroups designated for that purpose, is permitted within the bounds of net etiquette.
24. The *Organization:* field in private electronic mail or public newsgroup article headers must always be *Melbourne PC User Group, Australia*, the name of the service provider. Any other organisation or business name is permitted only in the four-line (maximum) "signature" text that is optionally inserted at the end of the message or article.
25. Connection of any networking system or device that permits multiple users to share one account simultaneously is not permitted.
26. The *From:* field used in mail and news messages must be the Melb PC assigned user name, e.g. *jjones@melbpc.org.au* not the address where a reply is sought, e.g. *jjones@pobox.com.au*. Such an arrangement should be managed by use of the *Reply-To* field.
27. Melb PC may assign its rights and obligations under this agreement to an Internet access provider that is of equal standard to Melb PC, and after notice of assignment is given to the subscriber, this agreement shall have operation as if it had been entered into between the assignee and the subscriber and Melb PC's rights (except for its right to recover any money owed to it immediately before the assignment) and obligations under this agreement shall be at an end.
28. The parties submit to the law of Victoria, Australia in relation to any the interpretation of this agreement, or any dispute arising out of it. ☐

Service required and payment

Subscription	$ 140.00
Melb PC Internet Kit software	
Windows 3.x version @ $10.00	$ ....
Melb PC Win 95/98 setup @ $5.00	$________
Total	$________

Tick ☑
☐ Cheque for above total is enclosed.
or
☐ Debit my card with $.............
☐ Bankcard / ☐ MasterCard / ☐ Visa

Expires: ....../......
Number:

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

Name on Card: ....

Signature: ....

Applicant details

First Name: ....

Last Name: ....

Membership Number: ....

Postal Address: ....

....

Postcode: ....

Telephone (day): (........) ....

Telephone (evening): (........) ....

Job Title: ....

Employer: ....

Tick ☑
My age is: ☐ 18 or above. ☐ Below 18.
I hereby apply for the Internet service described on this and the previous page

Signature: ....

Additional Family Members who will share the one account/user name:

Name ....

Signature ....

Name ....

Signature ....

Name ....

Signature ....

Applicant(s) to complete (CAPITALS, please)

Parent/guardian to complete

(If any of the applicants is below the age of 18) I am the parent/guardian of the applicant. I am aware of the nature of information available through the Internet and support this application.

Name: ....
Telephone (day) (........) ....

Signature: ....

User name

List below the user ("login") names you would like, in order of preference, up to eight lowercase characters and/or numerals. Write very clearly, to avoid our confusing certain letters. User names are expressed in lowercase letters and numbers and must represent your real name in some recognisable way, e.g. "John J. Jones" might request user names such as "john", "johnj", "jjones", etc.
Any user name that is already allocated or deemed unsuitable in the opinion of the system administrators will not be allocated.
Preferred full name (e.g. *John J Jones* or *Jones Family*), to be recorded on the system.

....

Previous name (if to be changed):								
Choice 1:								
Choice 2:								
Choice 3:								
Choice 4:								
Choice 5:								

Office use only

☑ Tick as applicable:

☐ Form and fee correct

☐ Parent of underage applicant contacted (date) ....../....../199...

☐ Membership database checked and updated

☐ Incomplete form returned to sender (date) ....../....../199...

☐ Acknowledgment returned to sender (date) ....../....../199...

Initials of office staff: ....

MELB PC USER GROUP

MEMBERS' DISCOUNTS

If you are a member or advertiser offering a discount on goods or services to Melb PC members, on production of their membership cards, please contact the office to register

Computer service, parts, support, etc

Austral Data Processing Services
Forest Hill
Ph: 9894 0199
Fax: 9894 7688
20%—(not hardware) on consultancy, data backup/storage, maintenance.

Aylott Computing
Elsternwick
Ph/Fax: 9596 6454
Mob: 0413 393 486
E-mail: daylott@bigfoot.com

Batterymaster
Murrumbeena
Ph: 9563 8460
Fax: 9579 4844
15%—batteries for laptop computers.

Bayside PC Services
Mentone
Ph: 9585 1645
10%—selected services.

Cables 4 PCs
Bulleen (near Balwyn)
Ph: 9852 1779
Fax: 9852 1868
10%—off all new IBM & Macintosh cables, adaptors, data switch boxes & networking equipment.

Calculator King
St Kilda Road
Ph: 9866 8753
Fax: 9820 9652
10% – all calculators (inc. scientific/financial and speciality). Personal Organisers: Sharp, Casio, HP, Psion.

Compatible Toner and Ink
North Carlton
Ph: 9388 9744
Fax: 9388 9755
15%—Re-manufactured laser printer cartridges and inkjets.

Greensborough Computers
Greensborough
Ph: 9434 6166
Fax: 9434 6033
20%—(labour only) on repairs and upgrades for individual Melb PC Members. 5% on some models of new PC Systems (please enquire).

Metropolis Corp. Pty Ltd
Ferntree Gully
Ph: 9752 4242
Fax: 9752 3777
10%—computer systems (incl. free 24-hour software/ technical support.) $35 per hour for maintenance/support

Modem SuperStore
Box Hill
Ph: 9899 4744
Fax: 9897 3939
5%—Melb PC Member discount.

Moon-Ess Computers
Essendon
Ph: 9326 2776
Fax: 9326 2797
10%—service and repairs, new & secondhand parts & systems.

Mountain Visions Pty Ltd
Sunshne North
Ph/Fax: 9310 1063
10% – on labour only — customised software, hardware & software consulting, maintenance, on-site training.

Nucleus Computer Services Pty Ltd
Carnegie
Ph: 9569 1388
Fax: 9569 1540
10% – on all services on equipment.

PCLC Computers
Heathmont
Ph/Fax: 9870 3288
20%—labour on upgrades, 5% on some new systems.

Pollock Computer & Technical Services
Hampton
Ph: 9533 5002
Fax: 9598 3186
20% – Personal PC tuition & problem solution.

Sender Computer Training
Caulfield
Ph:9523 1588
20% – One-to-one computer training.

The Power of 2, Software and Marketing
Pakenham
Ph: 5940 2020 BH & AH
10%—registered copies of Brothers Keeper genealogy software. Local support, manuals & supply of updates. $75 plus postage.

Scanner Place
Box Hill
Ph: 9897 3777
Fax: 9897 3244
www.ausmedia.com/au
10%—Software (often more)
5%—Hardware
$10—Ink refill kits.

Stone Computer Installations
Ph: 9315 0095
Mob: 0412 099 538
25%—Hardware/software installation, internet set up and problem solutions.

Summit Computers
Lilydale
Ph: 9739 6269
Fax: 9735 0503
20%—on labour (service, networks, etc),
6%—hardware & software.

Books, magazines, software, etc

Advanced Computer Products
St. Albans
Ph: 9364 1886
Fax: 9367 3639
20%—all computer books & software.

Capricorn Programming Services
Frankston
Ph: 9775 5377
Fax: 9774 5434
10%—on Scanlab Vol.1 Antivirus & virus education kit.

Collins Booksellers
(Technical and Academic Centre)
Melbourne
Ph: 9654 3144
10%—computer books.

Computer Book Company
Mt Evelyn
Ph: 9737 0411
Fax: 9737 0433
20%—all computer books, mail order

Computer Associates Pty Ltd
Glen Iris
Ph: 9825 5600
Fax: 9884 0844
E-mail: info@vet.com.au
10%—Vet Anti-Virus Software.

Dymocks, Shop 2
Melbourne
Ph: 9663 1344
Fax: 9663 1581
10%—computer books, not on magazines.

Dymocks
Brighton
Ph: 9592 1911
Fax: 9592 1611
10%—computer books.

Dymocks
Westfield Shopping Town, Doncaster
Ph: 9848 7209
Fax: 9848 7307
10%—computer books.

Dymocks
Frankston
Ph: 9770 0300
Fax: 9770 0400
10%—computer books.

Dymocks
Fountain Gate
Ph: 9796 6459
Fax: 9796 6509
10%—computer books.

Dymocks
Pran Central, Prahran
Ph: 9510 2100
Fax: 9519 2520
10%—computer books.

Trevor Gibbs
Melton
Ph: 9743 8917
15%—books: "Windows Whys" and "Easy DOS It", $16.95 ea, $32 for both. Incl diskettes.

ITS Information Technology Systems
Greenvale
Ph/Fax: 9333 2197
20%—computer books, Educational Software.

McGills Authorised Newsagency
Melbourne
Ph: 9602 5566
10%—computer books.

Polyester Books
Fitzroy
Ph: 9419 5223
Fax: 9419 5451
10%—on all fiction, science, computer & non-fiction titles, magazines, comics & T-shirts.

RMIT Bookshop
Melbourne
Ph: 9663 5855
Fax: 9663 7528
10%—all books.

Technical Book and Magazine Company
Melbourne
Ph: 9663 3951
10%—computer books.

The Worsley Press
Hastings
Freecall: 1800 622 805
Ph/Fax: 5979 1112
E-mail: info@worsleypress.com
10%—& free postage.

Other services

Adept Accounting and Taxation
Mill Park
Ph: 9436 7604
10%—on all taxation return preparation & business accounting services.

Blinds of Best Value
Oakleigh South
Ph: 9562 7788
Fax: 9562 7757
15% – top quality vertical, holland, venetian, timber venetian blinds and shutters, and all types of awnings.

Gripstep Floor safety treatment
Glen Waverley
Ph:9574 8244
10% – on anti-slip floor treatment for tiles, vinyl, timber, cement etc.

Heal Your Life Astrology
Marysville
Ph: 5963 3626
Fax: 5963 3737
10% – on all birthchart consultations

Jowett and Moulton Chiropractors
Melborne (city)
Ph: 9629 1016
15% – dicount on treatments provided by the chirpractor. Massage and acupuncture also available.

Mediware Applications
Camberwell
Ph: 9889 9234
Fax: 9889 9236
5%—(purchase), 10% on training and installation of Dental, Medical (including MedClaims) & Allied Professional Patient Management & billing software.

Mike McKeon Music
Dingley Village
Ph: 9551 7363
5%—on our Octet or 10% on a 14 pce. Big Band and two vocalists. Discount off Musicians' Award rates. For dinner dances, weddings, balls & special events.

Min Thong Lee
c/- AP Insurance Brokers
Queen St, Melbourne
Ph: 9602 1869
Fax: 9602 1876
5%—life insurance, loans, home & contents, motor, commercial.

Newtech R&D
Kilsyth
Ph/fax: 9723 7535
10%—on electronics consumer product design & Japanese translation.

Quarter Deck B&B
San Remo
Ph: 5678 5485
Fax: 5678 5545
E-mail: rosco@melbpc.org.au
20% – on B&B stays of two nights or more. Great views and close to many tourist attractions.

Sit Right Chairs Pty Ltd
Coburg
Ph: 9354 2612
Fax: 9354 2795
10% – off range of office and ergonomic chairs.

Sleepwear Factory Shop
South Yarra
Ph: 9826 2999
Fax: 9826 8207
10% – on half-price ladies' and girls' nighties, pyjamas, dressing gowns. Also maternity nighties (summer/winter).

James Small, Solicitor
North Balwyn
Ph: 9830 0233
Fax: 9830 0222
20% – on standard conveyancing and will preparation fees (exc. govt. charges and disbursements).

Stewart Smith
Australian Commercial Credit
Licenced Insurance Brokers
Ph: 9816 3264
Fax: 9816 3270
25% – off normal costs. Leasing Equipment & cars. Home/commercial mortgage loans.

Tortoise Head Guest House
French Island
Ph: 5980 1234
Fax: 5980 1222
10%—on accommodation, fully catered, adjacent bay.

Ultimate Business Service Opportunities
Strathmore
Ph: 9483 4417
Fax: 9374 2919
25%—on travel cards that allow 50% off world-wide hotels. 12 month g'tee.

Yodgee's of Prahran Leather and Travel Goods
Prahran
Ph: 9510 2413
Fax: 9510 2916
10%—computer briefcases and travel bags, R.M.Williams boots and clothing, Dr Martens footwear. ❑

SIG Co-ordinator
Dave Botherway

Special interest group meetings

Home pages
Many SIGs have their own home page. You can find links to these via *www.melbpc.org.au/sig/index.htm*

Access (Database)
access-sig@melbpc.org.au
2nd Monday
6.30 – 8.30 pm
Ray Watson
9576 8520 BH & AH

Assembly & Other Languages
alt-sig@melbpc.org.au
1st Thursday
7.00 – 10.30 pm
Melb PC SIG Room
Felix Hofmann
9523 5400 AH
Don McKenzie
9521 3060 BH

Ballarat
ball-sig@melbpc.org.au
1st Thursday
7.30 – 9.45 pm
(except school holidays)
Ballarat & Clarendon College
614 Mair St, Ballarat
VicRoads map 254 L12
Ken Smith
5332 7851 BH & AH

Bendigo
bend-sig@melbpc.org.au
2nd Wednesday
7.30 – 10.00 pm
Girton Grammar School
105 Mackenzie St, Bendigo
(Vine Street entrance, then follow the signs)
VicRoads map 282 K14
Russ Collins
5439 3708 BH & AH
Joe Henry

Clarion
clar-sig@melbpc.org.au
4th Wednesday
7.00 – 10.00 pm
Melb PC SIG Room
Chris Livingstone
9431 1897 BH & AH

Communications
comm-sig@melbpc.org.au
2nd Wednesday
7.00 – 9.30 pm
Melb PC SIG Room
Philip Lew
9822 2998 BH (brief calls)

Daytime
day-sig@melbpc.org.au
2nd Thursday
10.00 am – 12 noon
Melb PC SIG Room
Don Buchanan
9509 7119 BH & AH
Graeme Minto
9440 5030 BH & AH

Digital Photo
3rd Monday, 7.00 pm
Melb PC SIG Room
Thom Lyons
0417 525 171

East
east-sig@melbpc.org.au
2nd Tuesday
7.30 – 10.00 pm
Multinet Theatrette
200 Rooks Rd, Vermont
Melway map 62 H2
Keith Beresford
9733 5044 AH
9736 2515 BH
Margaret Brown
9874 5778

East Workshop
east-ws@melbpc.org.au
Sunday following the East SIG meeting,
10.30 am – 2.30 pm
Multinet Theatrette
200 Rooks Rd, Vermont
Melway map 62 H2
Jim McNabb
9754 4862
Ken Gubbins
9898 5478 PH/FAX

Graphics
graph-sig@melbpc.org.au
3rd Monday
7.30 – 10.30 pm
Melb PC SIG Room
Yahya Abdal-Aziz
9562 1023 AH (brief calls)

Hardware
hardware-sig@melbpc.org.au
3rd Wednesday
7.00 – 11.00 pm
Melb PC SIG Room
Felix Hofmann
9523 5400 AH
Thom Lyons
0417 525 171

LUBe
lube-sig@melbpc.org.au
3rd Thursday
7.00 – 10.00 pm
Melb PC SIG Room
Thom Lyons
0417 525 171

MACE
(Melbourne Atari Computer Enthusiasts)
mace-sig@melbpc.org.au
2nd Sunday
10.00 am – 2.00 pm
Melb PC SIG Room
Graham Hurford
9416 1126 AH
Roger Davies

Music
music-sig@melbpc.org.au
2nd Thursday
7.30 – 9.30 pm
Melb PC SIG Room
Yahya Abdal-Aziz
9562 1023 AH (brief calls)
Eric Best
9376 1984 AH

New Users, East
newe-sig@melbpc.org.au
2nd Tuesday
7.30 – 10.00 pm
(except January)
St Mark's Anglican Church,
Cnr Canterbury & Burke Rds, Camberwell
Melway map 45 J10
Doug Brooke
9822 3458 BH & AH

NT
2nd Tuesday, 7.00 pm
Melb PC SIG Room
Andrew Callaway
9619 4067 BH

OS/2
os2-sig@melbpc.org.au
4th Tuesday
6.30 – 10.00 pm
Melb PC SIG Room
John Angelico
9544 8792 BH & AH

Programming
prog-sig@melbpc.org.au
2nd Tuesday,
7.30 – 10.00 pm
Melb PC SIG Room
Ross Hall
5428 6470 AH
9699 4000 BH
Andrew Callaway
9619 4067 BH

Quicken
quicken-sig@melbpc.org.au
4th Thursday
7.00 – 9.30 pm
Melb PC SIG Room
Viv Martin
9583 5372 BH & AH

Retired & Interested Persons
rip-sig@melbpc.org.au
10.00 am – 12 noon
4th (*not* last) Friday
Lutheran Church,
25 Cypress Ave,
Glen Waverley
Melway map 62 A9
Ken Thomas
9884 5309 AH
Noel Peters

Video Editing (Linear)
video-sig@melbpc.org.au
4th Monday
7.00 – 9.30 pm
45 Talbot Ave, Balwyn
Melway map 46 E8
Albert Vanzet
9439 1768 BH & AH

Video Editing (Non-linear)
videonl-sig@melbpc.org.au
1st Tuesday
(including Cup day)
7.30 – 10.00 pm
Melb PC SIG room
Lawrie Weston
9742 3738

Warragul
warr-sig@melbpc.org.au
1st Friday
7.30 – 10.00 pm
Warragul Education Centre
Smith St, Warragul
VicRoads map 337 Q8
Lindsay Perston
5623 1756 AH

Web Development
webdev-sig@melbpc.org.au
4th Monday,
7.00 – 10.30 pm
Melb PC SIG Room
Thom Lyons
0417 525 171

Web Development workshop
webdev-sig@melbpc.org.au
2nd Saturday, 10.30 am
Melb PC SIG Room
Thom Lyons
0417 525 171 (members may bring their own systems)

Western Suburbs
west-sig@melbpc.org.au
4th Tuesday
7.00 – 9.00 pm
Sunshine Squash Centre,
cnr Kent and Stewart Sts,
Sunshine
Melway map 41 B2
Robert Mead
9312 5427 AH

Windows
win-sig@melbpc.org.au
1st Monday
7.00 – 9.30 pm
Melb PC SIG Room
Lynn Pollock
9598 3186 AH
9533 5002 BH

❑

Updates and corrections
Please send to

Dave Botherway
SIG Co-ordinator:

daveb@melbpc.org.au

or via the office.

SIG Co-ordinator
Dave Botherway

SIG meeting reports

Daytime

» *Don Buchanan*

May

Regular attendee Ruth James was our presenter for the morning, with Graeme Minto in charge of the overall meeting.

As promised, Ruth displayed the "Document System" that she created to manage her large collections of miscellaneous data files. They are kept in an Access database, and the system written in Visual Basic for Applications.

We were shown how to create a new file within any file type on the computer.

We were also shown how to embed and link existing files, reminded about the importance of using a relevant key to cover each group of files, and then create up to three keywords for later searching.

The file groups can be searched by subject, source, date, keyword or any combination of the above.

Many types of files may be embedded in the database e.g. Excel, HTML, PDF, WAV, MIDI, etc. There was also a discussion on the relationships of these file extensions to the OLE Object field, because if the registration of the files is not correct, then problems can occur.

June

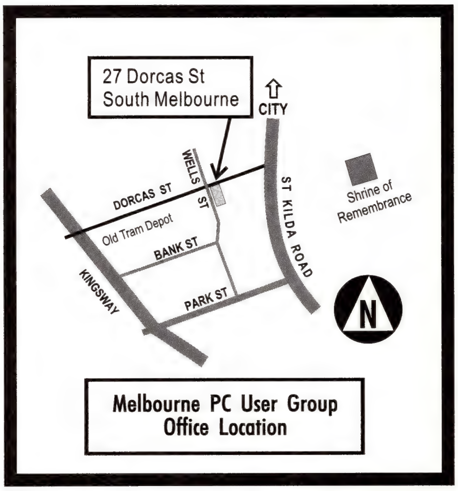
Doug Brooke has agreed to address the following issues:

- Y2K relationships, saving CMOS settings
- Copying long file names, system files, hidden files.

More of this in the next issue.

July

Arrangements are in hand for Alan Hamilton to guide us through various examples of Microsoft Excel spreadsheets, at exactly the critical time of the taxation year.



‡ Many SIGs meet at Melb PC's premises, at 27 Dorcas Steet, South Melbourne.

East

» *Frank Walsh*

With an attendance of over 140 interested and attentive computer enthusiasts, Keith Beresford opened the formal meeting at 7.30 pm.

Keith gave a brief account of the immense value of the recent weekend at Camp Manyung, enjoyed by 17 Melb PC members. He mentioned activities, including the dreaded but successful formatting of hard drives, setting up of Web Pages and the inevitable earnest discussions on computer problems in general. In passing, a few details of some of the extra-curricular activities generously made available by the Camp Management were also mentioned. A delightful and comprehensive account of the activities of the weekend has already been published in *PC Update*, June 1999 pp 45—47. Any further personal details of the weekend are available only from the lucky 17. A firm booking has already been made for May 2000 for a similar weekend

July

SIG and other meeting dates

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Note: These (‡) meet at Melb PC			1 Assembly & Other Languages ‡ Ballarat	2 Warragul	3	4
5 Windows ‡	6 Video Editing (Non-linear) ‡ Committee ‡	7 **Monthly meeting**	8 Daytime ‡ Music ‡	9	10 Web Development Wotkshop ‡	11 MACE ‡
12 Access (Database) ‡	13 Programming ‡ East New Users, East	14 Communications ‡ Bendigo	15 LUBe ‡	16	17	18 East Workshop
19 Graphics ‡ Digital Photo ‡	20	21 Hardware ‡	22 Quicken ‡	23 Retired & Interested Persons	24	25
26 Video Editing (Linear) Web Development ‡	27 OS/2 ‡ Western Suburbs	28 Clarion ‡	29	30	31	

workshop.

For those who missed out this year and would like to find out more, please send your name and e-mail to *eastsig@melbpc.org.au*

For those who are interested in the location itself, the different group activities, facilities, accommodation and the generous meals provided make it an ideal location. The Manager, Matt Feutrill, welcomes further inquiries on (03) 9787 1867.

Informal meeting (Stewart Bedford)

At 7.00 pm Stewart was surrounded by a number of interested people, new to computers and ready to ask questions about commencing to enjoy these useful communication tools. One of the fascinating things about Melb PC meetings is the never-ending procession of people who may be observed, either just beginning, or enthusiastically continuing, the journey along the learning curve towards a most rewarding and useful hobby.

Questions and answers (George Skarbek)

There seems to be no shortage of people seeking answers to the foibles of their computers. As usual, George provided answers and likely solutions. Items raised included:

- Internet sites giving "Site Down" messages
- Alterations to the Windows 98 start menu
- Compatibility between sound/colour cards
- Win 95-98
- Motherboard freeze and related BIOS settings
- Internet Explorer 5 e-mail sending bug
- The slow loading of Internet sites.

George strongly recommends the use of the help service on the Melb PC home page to handle difficulties related to our Internet service. (*help@melbpc.org.au*)

Tips and tricks (Michael Hubeek)

AVI Screen Saver

Michael first demonstrated the steps involved in using this program to load additional multiple screen savers from various sources into the right place on his hard drive so that they could be readily accessed when needed.

Michael then worked through the procedure required to access, download, configure, and use a program called "Get Right". This program enables you to ensure that downloads from the net or other external sources are effectively received, screened for virus infection and correctly installed on your computer.

It can log you on to the Internet at an appropriate time to automatically download specified files, and will turn itself off when the task is completed. This can be very useful for those keen Internet users who need to sleep between 2.00 am and 8.00 am each day.

Victoria Police Training School (Det Sgt Graeme Cleaves)

We were treated to a most interesting real life and, at times, chilling account of the ever present dangers of undercover police work, the extent and complexity of the surveillance and planning detail required and the difficulties associated with convincing the legal system that the charges should apply. The common theme running through the three examples that Graeme presented vividly brought home the utter ruthlessness of those who manufacture and peddle drugs in our society, and their total disregard for the safety of any innocent people who might accidentally cross their path. With profits from drugs like amphetamines (with the price of just 1 kg measured in five figures or more), there seems to be no shortage of such "entrepreneurs" who are willing to set up factories in ordinary suburban locations. These people often have minimal understanding of the dangers involved in handling the tons of chemicals required and their carelessness highlights the extreme risk in these chemical kitchens. The toxic chemicals involved include cyanide, ether, hydrochloric acid, phosphorus and a number of other unstable materials and dangerous equipment. The difficulty of arranging for the safe disposal of the waste chemicals and equipment created by the drug laboratories once their inquiries were completed was a constant problem facing the investigators.

Our seemingly soft humanitarian sentencing laws and the way in which they are exploited must prove extremely frustrating to those members of the Police Force who risk their lives in attempting to contain the threat posed by the illegal drug manufacturers. The quantity and variety of firearms, all loaded and ready to fire, found in the possession of the suspects clearly illustrated the fact that criminals will always be able to obtain weapons in spite of the firearms laws supposedly designed to prevent them.

The IPL DataCom Group and OKI Printers (Brigitte Temling)

After an introduction from Brendan Hill and Wayne Howe from the IPL Group Brigitte described the features of OKI printers available currently. OKI has been a prominent name in computer printers for quite some time and, although not as fashionable as the other big three manufacturers, has a substantial share of the market.

Established in 1881, the company first manufactured telegraphic equipment. In 1981, using dot-matrix technology, it manufactured printers specifically designed for computers. It currently offers up to twelve different dot-matrix models, covering a range of print speeds and from 9- to 24-pin print heads. All are compatible with the majority of computer configurations on the market today.

Looking to the future and bypassing ink jets and lasers, a new range of printers suited to larger business applications is now being offered using LED technology. Having fewer moving parts than the laser printers on the market today, the new LED range of six colour printers claims longer printer life, reduced running costs, the use of plain paper, computer-operated print-control functions and dazzling photographic print quality.

East Workshop

» *Gary Taylor*

May

Thirty-one members attended this busy Workshop and the early birds heard that the venue would soon be changed to a location yet to be chosen. More details are and will be available on the Workshop's Home Page: *http;//www.vicnet.net.au/~eastsig/workshop/* including full reports of the Workshop's meetings.

The queries and problems handled were familiar:

- FDisk
- Slow computers
- Installation and customising of software
- Installation of hardware.

One persistent problem has been the non-provision of drivers/disks to purchasers of secondhand and even new computers.

A consistent groan at the Workshops and Swapmeets has been the lack of so-called elementary information for newcomers to the computing scene—how to use the mouse, how to install/erase software, how to use scanners, and so on.

An attempt will be made at the next Workshop to launch a section devoted to Genealogy and the Databases and Software peculiar to this subject.

OS/2

» *John Angelico*

Our May meeting began with numbers down (possibly due to the brisk weather). A total of 12 people were present including some new faces, and we received one apology.

We began the meeting with a general apology (from me) for the absence of the scheduled topic: TCP/IP networks. I indicated however, that planning for the next meeting—Warp Server NEW RELEASE—was already under way.

After a general news update segment, we did a bit of housekeeping regarding Saturday's Technical Support session, and then opened the meeting for general problem-solving, useful information and operating tips. I had come with one of my own little problems: a newly-acquired Seiko Smart Label Printer, which would not respond when connected to my ThinkPad 760EL.

Our newest guest, Jamie, was made welcome and his initial questions were steered in the direction of relevant members present. It wasn't long before a general buzz spread around the room, indicating "animated discussion in progress".

We closed the meeting at 9 pm and adjourned to the usual eatery.

On Saturday May 29th we held our Technical Support day from 10 am to 3 pm. About 15-20 people attended across the day, with six systems being checked, tested, worked on, installed or fitted with the latest drivers.

Four of the six systems went away in better running order than when they came (my Smart Label Printer is still causing me problems on the ThinkPad and one person was still having problems with a printer driver).

All in all, a successful day, even though you can't win them all! Never mind, Victoria won the State of Origin game.

We still have the following topics planned for the next few months:

22 June	Warp 5 Server (looks like it will take the whole time)
27 July	Java and Databases
24 August	Multimedia + Graphics
28 September	Utilities: Chris Graham and Dennis Bareis

Hope to see you there!

Quicken

» *Bob Mayston*

It was pleasant to see and welcome some visitors who joined us together with our regular members for the May meeting.

Unfortunately our anticipated guest speaker had to withdraw at late notice so the evening was reprogrammed by Viv, and devoted entirely to questions and answers and some interesting ones at that. Included were:

- Reinstalling Quicken V6. It refused to accept the original registration number. The trick here is to use a text editor and edit the Quicken.ini file in the Windows directory. Change the customer number seen there to your original retained one
- Quicken has an automatic backup facility. The latest copy has "1" at the end of the file name. You can set the number of retained backup files by editing the Quicken.ini file
- When using the share price update facility in Quicken V7 it is necessary to manually set the proxy. Automatic proxy setting doesn't work
- Unresolved difficulty in printing share price history for 5 years
- On franking credits: Rather than have them integrated in the same register as the share actions, a suggested better way is to separate them into a separate asset account
- To facilitate easy bank reconciliation, pay all your share dividends into a cash holding account and in turn pay this into the bank account as a total deposit. All entries will then agree with entries on the bank statement
- Not all the graphs in Quicken can be printed out
- Files can be shared between several people if classes are used to separate each persons transactions
- In setting up your own chart of accounts the opening balances of each account are written by Quicken back to the same account name as an opening balance. This is fine so long as you do not introduce a new account after the original setup. If so you disturb the original balance sheet equation. If however you write each opening account reference to a Net Worth (Liability Account), then new accounts may be added as long as these opening balances are also written back to Net Worth (Capital or Owners Funds)
- To change icons on the the task bar use edit, options, user specified account, assign icon
- Categories may be merged or combined by making one the sub-category of the other then deleting the sub-category, It will then be merged with the header category

The new edition of Quickbooks, V6, is out. At first view apart from being in full 32-bit code, it seems mostly directed toward multiple users. All being well we may take a closer look at our next meeting.

Don't forget if you have a problem, massage any sensitive data and bring it on disk to our meeting for a hands-on workshop session of problem solving. Our next meeting is Thursday June 24 at 7 pm. After the meeting closes around 9.30 pm we retire to a nearby coffee shop for more informal chat. Come along, a friendly welcome awaits you.

Retired & Interested Persons

» *Bill Cooney*

An excellent presentation of the RIP SIG home page was the highlight of the May meeting. Noel Peters and Kelvin Cording have done a fine job in its preparation and Kelvin's showing and explanation of the adventures and discoveries using "Front Page" was not only entertaining and instructive but also an object lesson in using "Power Point". The address is *http://melbpc.org.*

au/sig/rip. Well done guys and thanks.

One of our sub-groups, "New Users", grew beyond its first small meeting room into the main area where members assemble for the main part of our monthly meeting. That was OK for room but the buzz of conversation which grows as more people arrive, makes it difficult to hear questions. To overcome the problem we tried using a mike and speakers but that doesn't work either as the chatting members just talk louder. All this is just an indication, I guess, of the great fellowship and interest that makes our group so popular and well attended.

We plan to have another "Swap 'n' Sell" auction in July and as most of the items offered at these occasions are what is left after someone's update, there is often the odd bargain for those who have opted out of that frantic and sometimes unnecessary path. Come along and see what is on offer.

We hear that one of our foundation members is not too well. Roy Alexander had a bypass op and is feeling the effects of that. Hope to see you soon Roy.

I heard of a guy who had an identity chip "fitted" to his cat and asked the vet what about this Y2K bug? What should I do if Tibbles doesn't wake up on 1/1/2000? The Vet's advice was quite succinct: Just reboot it!

See you in June...

Video Editing (Linear)

» *Albert Vanzet*

If we get any more members to our meetings we may have to ask the Balwyn venue management to allow us to use their theatre. With about 65 people in the room there was hardly enough space left to park more chairs. Such is the success of our meetings and we seem to grow from strength to strength.

A sudden downpour of Melbourne's unpredictable weather could not dampen the attraction of our May meeting's special speaker and a presentation of a new video-editing program

After a short introduction by the convener, our speaker for the evening, John Mantovani of HIVID Services, gave an animated talk about care and repair of our video cameras and VCRs. John had brought some parts of this equipment to our meeting. These were passed around the members. Some of us may have been brave enough to open up their VCRs to have a look inside, but few would dare to do the same with their video cameras. Now with these parts in our hands some of the mysteries of these electronic marvels became more real. We were shown how the video equipment has become more and more miniaturised and we were amazed to hear that the new digital video cameras record ten "slices" of video on the width of a hair. John not only explained to us some of the intricacies of our video equipment; he also told us that although the cost of replacing a part can be relatively small, the miniature nature of the equipment raises the cost of labour considerably. John warned us about the use of head cleaning tapes. He said that they act like sandpaper and did not clean the small gap in the heads properly. A regular cleaning by a qualified technician would delay the ultimate expense of replacing the head drum by several years.

If time had not run out, John Mantovani could have spent another hour answering questions from his audience.

After the break we went straight into the presentation of the new Pinnacle Studio program, DC10plus. Although this is really a non-linear video-editing program, it is visually the same as its predecessor, Studio 400.

From the camera the video images are transferred and compressed on to the hard disk. From that point the camera is no longer needed. The video clips can be moved to the TimeLine (the editing media) in whatever order we want them to appear in our video. Here we add transitions, titles, narration, background sounds and music. When we are satisfied with our editing sequence we instruct our computer to render the video so that we can finish the job with the instruction: "Make Video". This command will cause the computer to send the edited images and all the added features to our VCR. The video production is ready for our audience.

It seemed all very simple and easy to operate. It is, but there is one problem. The computer needs to be capable of handling the speed that is required to move these 25 images per second, the background sound, the narration and the background music. Furthermore the computer needs a hard disk that will swallow up megabytes with glee. Referring to the hard disk, one of the subscribers to Pinnacle's Webboard quoted: Non-Linear Editing—NLE—stands for Never Large Enough. Don Watson-Brown, our technical man at our meetings, advised us that a minimum of a 12, but preferably 20 GB hard disk is required to capture sufficient video to make a reasonable length production. And that's where the problem is. Hobbies cost money and for those of us, who are used to the rather simple requirements of Studio 400, we would need some solid excuses to convince our partners that we really cannot live without that extra computer power,

The evening ended way past its intended hour and was a great success.

The speaker at the June and July meetings will be Don Hawkins, ex-sound engineer at the ABC. He will talk about sound with video, especially with Studio 400 in mind.

If you have a video camera and a computer and accumulated a stack of videotapes you wish you could convert into some pleasant and entertaining productions, come to our meetings. It may lead you into a new and satisfying hobby.

Video Editing (Non-Linear)

» *Lawrie Weston*

Where are we now?

In April and May we covered the topic of sound. Don Hawkins, a sound engineer, led us through the attendant problems and things to consider when recording and editing sound in our video productions.

Too many otherwise good videos are spoiled by incompatible sound clips. We all can (painfully) remember instances such as background music too loud to hear, commentary, etc.

This can be overcome by checking the sound levels are consistent at each stage of production, including the output of the PC sound card.

On the recording side of things, we were given several useful tips such as recording ambient background noise on location to use when necessary in our productions.

We were also given a run-through of

various types of microphones and when they are best used. Other useful tips included using shielded plugs, mounting mikes off camera and in the edit process, what are the appropriate leads to use and why.

Our thanks to Don and his wife for the work they put in on the workshops.

In June, numbers were a bit down, probably due to the fact that we met on 1 June, just as most people are adjusting themselves to a change of month.

Two of the 28 assembled volunteered to come out and have a go at editing for the first time, with an unfamiliar program, by following a tutorial.

Time prevented us getting too sophisticated, however we ended up with a short video with background music, a title and a few clips linked by transitions. Thanks Jim and Doug for being willing "Guinea Pigs".

For the benefit of a few new attendees, we had a review of Non-Linear Video editing options as regards hardware and software. The meeting closed with a short review of the status of our editing of the Mike Iampetro visit footage.

The main topic of the July meeting will be a visit by Brad Morton of New Magic to demonstrate some of their products and give a demo of editing with Video Action Pro, the software that comes with their DPS Edit Bay. Another of their products is the well-respected Canopus DV Raptor card.

Brad is a well-spoken, interesting speaker and from past visits we have found him to have a wealth of information on many Non-Linear editing topics.

The August meeting is set down for a practical night and I am awaiting suggestions as to what form members would like it to take.

At the June meeting, those present showed interest in the topic of video streaming, Do we have an expert on this topic, willing to come and demonstrate this procedure to us?

We could, if possible, include it in the August meeting or even substitute it for the proposed program that night.

We meet in the large SIG room on the first Tuesday of each month at 7.30 pm. We try to close of around 10 pm.

Windows

» Bob Mayston

We had another full house with extra chairs required to cater for the overflow including 11 new members. As usual Lynn introduced the meeting with the question and answer segment. There is never a shortage of questions and some highlights were:

- Sending e-mail attachments in Word 97 to someone who only has Word 95 and who could not read them. Two solutions. Resave the Word 97 document as Word 6/Office 95 then send, or get the free Word 6 to Word 97 converter file from Microsoft
- An e-mail with embedded *.avi file. The receiver could not find the avi file. The file remains embedded in the message. Warning! All files received on the net should be downloaded to a temp file and checked for virus before running them
- To print only portions of a long e-mail. Mark out the required part then cut and paste. Editpad is a superior program to Notepad for reading text files as there is no limitation on the file length
- It was reported that the combination of Win 98 and IE5 gives a drop out or freezes the machine on the V90 connection of Melb PC. Another reported that the connection dials and handshakes OK but then immediately disconnects. Happens with two different modem combinations. Suggest try with a different ISP to check if it is an ISP/modem problem.

The first demonstration was given by Lynn who reviewed several useful free utility programs to make your computer life more interesting. These included:

- Networking Dial Up Monitor. Details all data on your internet connection
- Disk Data. A small program to show slack space and other details of your disks
- Eraser. This, as it suggests, absolutely erases data from your disks. There are 3 levels of security including conformity to USA military specification
- Whip11. This hides a file in an innocent looking Bitmap picture file. The receiver needs a password to uncover and retrieve the hidden file
- Two Y2000 compliance checkers, one from Microsoft and the other Ontrack v1.01.

Lynn then demonstrated how to check an Iomega drive for the "kiss of death" which can destroy both the disk and drive. The test program is TIP.EXE. (Trouble in Paradise). Next, new updated drivers were installed and compared with the old. Copying the same file took 2.07 minutes with the old compared with 1.25 with the new. The new driver allows you to change the drive letters for both your CD and Iomega drives. Formerly you needed to do this from Windows Device manager. It's a good idea to nominate letters well down the alphabet for this such as I for Iomega and R for the CD, as this allows additions of hardware without need to reconfigure your drives. The Iomega site also has several external programs for free download such as Recordit.exe. This allows you to download from an audio CD to an Iomega or hard drive. Another is Norton Recovery, which allows you with one floppy and one Iomega disk to back up your Windows system so if Windows crashes you can restart and recover data from the Windows drive.

The final part of the evening was devoted to looking at the Resource Kit for Windows 98. This is on the Windows CD under Tools. This is an extremely elaborate data base of information about installation and possible problems with Windows 98. Earlier in the evening a question was asked about printer spooling. Using the Resource Kit file and checking under printing gave a detailed description of the spooling function. This information is exactly the same as that published by Microsoft in book form, costing about $100. The answer is clear, if you have a problem first look in the Resource Kit found on the Windows CD for the answer.

Several possibilities are on offer for next month's meeting so watch the *melbpc.general* and *melbpc.sigs* newsgroups for the final format. Don't forget if you have a machine with a Windows-related problem and would like a hands on practical solution, phone Lynn and arrange to bring the machine to one of our meetings. These are held on the first monday of each month at 7 pm in the club rooms, Dorcas St. Next meeting is on Monday 5 July. ☐

TUTORIAL

Jonathan Eaton

Nothing to do with biscuits: Understanding Web "cookies"

You won't normally see them when you're connected to the Internet and happily surfing away—but they will slip unnoticed into files on your hard disk, and your Web browser will probably never warn you of what's going on. Just what are these silent invaders—stealthy computer viruses, or simply bits of cyberspace refuse? "They" are in fact small textual messages called "cookies", sent by Web servers to browsers in response to a request for an HTML document, and, because browsers are by default configured to accept cookies automatically, few Internet users will ever notice them. This article will examine the purposes behind the use of cookies, explain why they have become necessary, and show how they can help (as well as possibly complicate) our use of the Web.

Browsers that support cookies accept a string of ASCII characters from a Web server and store the "cookie" in a file on the user's computer. Cookies thus save information relating to the user's interaction with the originating Web server, typically associating its URL with some related value or identifier. Subsequent requests for the same URL cause the cookie data to be sent to the remote server with which it was associated. A Web server's use of cookies, however, is not mandatory but instead is entirely the choice of its designer or manager. Cookies were introduced to overcome one of the basic characteristics (some would say "weaknesses") of the Web: there is no inherent connection continuity or "state" between a Web server and the client browser. This contrasts with the older style of computing that creates a "session" between a terminal and a remote computer (like "Classic" character-based Dialog or DataStar online services, for example). The session generates a history of commands, their associated output, and preferences that can be reviewed and re-run, and lasts until the user ends it. If you've ever wondered why many Web-based search services force you to re-submit your entire search each time you want to modify only part of it, then here's the main reason—"statelessness". Here's a (slightly truncated) cookie entry set by the BBC's site at *http://www.beeb.com/* as recorded by Internet Explorer 4:

```
BEEB_ID 10002983131827324596
beeb.com/02654980480
```

Not very enlightening, is it? The main point to note is the presence of a unique identification code associated with the Web address—which might, for example, be used as an index key to a user's registration details held on the server.

Imagine you have entered a Web-based online service, such as a bookshop, that works on the basis of adding items to an electronic "basket". As in a real shop, you put items for purchase in the basket and finally take them to the till for payment. To make this work, the server your browser interacts with must track your movements and record your selections, since you will typically need to request several different HTML pages during your shopping trip. In this case, one or more cookies will be set to store the data; when you fill in your credit card details to pay, all your selections are thus passed to the server. This use of cookies to provide a transaction or command log is not confined to electronic commerce. Web sites that offer searchable databases may use cookies to record the user's preferences and options, such as the wish to restrict searching to the past three years every time the database is accessed, for example. Or, in a bulletin-board system, a cookie will record you have "read all messages", so on the next visit you see only new mail.

How can you tell if a Web site is setting cookies? Most browsers have options to control handling of cookies; these include acceptance without warning, warning before acceptance, or unconditional rejection. In Internet Explorer 4, select Internet Options from the View menu. Click the "Advanced" tab and scroll down to the Section headed "Security". The subsection "Cookies" lists the options. In Netscape Communicator 4, choose Preferences from the Edit Menu, then Click on the "Advanced" option. Two cautionary notes: if you choose to reject all cookies, then some Web services will warn you that they will not function; if you opt to accept but notify each time one is set, then you will very quickly tire of clicking "OK" and your productivity will slump! Some Web sites wish to set up to 30 cookies when asked for their home pages; others may only require three.

Cookies can have other uses besides helping manage the problems associated with the need to provide a customised interface and content delivery. Many Web sites that offer some form of proprietary content require an initial registration procedure, involving sending some basic personal details to the desired service via a Web form. In some cases this involves the user having to choose their own username and password, or use one the provider has supplied. Cookies may be used to record a successful login attempt and often to support the option to "remember" who you are, thus suppressing the normal login prompt the next time you return to the site. Good practice here on the part of the site designer is to encrypt the user id and password entry stored in the cookie file to secure it from prying eyes.

Cookies have their problems, however. Since they are linked to the browser on the PC that accepted them, cookies cannot travel seamlessly with you as you move between computers in different locations. If someone else uses your PC to access a registration-protected site, they will become "you" if cookies are used for access control. If your cookies

until somebody invents something better, the cookie will remain

files become corrupted or are lost, then with them may disappear some of your personal Web service preferences and access rights. They contain mysterious data values relevant only to those responsible for creating them. For some Web users, cookies represent a sinister potential loss of control and possibly of anonymity—you can't tell precisely what purpose they serve, or whether their contents may be passed to another party. But until somebody invents something better, the cookie will remain with us as an invisible accompaniment to our Web explorations.

About the author

Jonathan Eaton is Electronic Resources Manager at London Business School Library, responsible for a wide range of networked services, including bibliographic, full-text, historical and real-time financial databases. He has previously worked as an information broker for HERTIS Information & Research and for London Business School's Information Service. He is a member of the project team for the eLib Hybrid Libraries Phase III-funded Project HeadLine; speaks frequently on electronic information resources management issues, and also writes regular columns for "Managing Information" and "Information World Review".

Acknowledgement

Reprinted from *Free Pint—"Helping 18,500 subscribers use the Web for their work"* with the permission of the author and editor. *Free Pint* is edited by Rex Cooke, FIInfSc FRSA.
E-mail: *rex@freepint.co.uk*
Web: *http://www.freepint.co.uk/* ❑

TUTORIAL

John Grant, Xiaoya Lin and Noel Craske

Using Java to implement client-server databases

Many organisations in the world maintain and collect large amounts of data. These are held in large databases, often stored in mainframes and managed by a Database Management System (DBMS). Over the years many organisations have grown and developed or purchased new DBMSs. Often these systems are incompatible with existing systems and custom programs have been written to interface with the database. Many organisations find the resulting mix of databases and programs increasingly difficult to keep track of, and even more difficult to extend. Many of them are turning to Java to develop interfaces with existing DBMSs and to develop new DBMSs.

What is Java?

Java is an Object Oriented programming language developed by Sun Microsystems. It gained popularity as a programming language on the Internet, and is now being used in many serious database developments. The primary reason for its growth in popularity is the fact the language is "hardware independent".

This means, unlike programs written in C++ and other languages, the program can run on many different hardware platforms without the need to recompile the source code. Another benefit is the language's in-built networking aspects. Many other languages provide networking support through add-in libraries, but only Java has this in-built to the core of the language. This results in extremely efficient and easy implementation of networking programs.

What is a client-server database?

A client-server DBMS has several key differences to standard relational DBMS. The basic setup consists of a client (or several) making requests for information from a DBMS that resides on a server in the network. The client will then receive the requested data from the DBMS and present it to the user in some format. The server handles much of the workload and has to contend with such issues as Concurrency Control, Security, Data Integrity, etc. Unlike stand-alone databases, the client-server database must deal with a network to transmit data to users. Other problems occur with data often not being stored in a single location, or even in the same DBMS. The problems associated with retrieving data from different database systems while maintaining the transparency of this to the user is currently under research, but the JDBC from Java may provide some help in solving many of the problems for developers.

ODBC and JDBC

Open Database Connectivity was developed by Microsoft to provide a standard interface to DBMSs. ODBC uses function calls to allow vendors to access any database that supports the ODBC interface. An ODBC driver that is written for each database then interprets these function calls. When using ODBC vendors can write ODBC-enabled or ODBC drivers and DBMS systems that will enable a wide range of products to interact with them. This results in a greater range of programs available to users for any given DBMS that they use.

When using ODBC three components are necessary:

- The ODBC client used to interact with users
- The ODBC driver, which handles the communication between the client and the DBMS server
- The DBMS server, which manages the data.

Java Database Connectivity (JDBC) was developed by Sun Microsystems to implement the same features as ODBC. The reason Sun did not use ODBC is the ODBC drivers are written in C and make extensive use of features available in C which are not present in Java. The JDBC Implementation has been written in pure Java and is based on the X/Open SQL Call Level Interface. Because the JDBC is written in pure Java it provides hardware and operating system independence.

To allow vendors and customers to use the existing ODBC-enabled technology the JDBC developers have provided a JDBC-ODBC Bridge that converts the function calls between the two technologies. This means that existing ODBC technology can continue to be used with Java developments.

JDBC, like most driver specifications, is low-level and functional. The basics of the functionality are contained within the *java.sql.** classes. The basic JDBC driver is loaded with a *java.sql.DriverManager* class. Once you have a loaded driver it is possible to open a connection using the *java.sql.Connection* class. The connection is perhaps the most vital part of the process, as the rest of the procedure centres around the use of the connection object. After the connection is created, most clients will begin to transmit queries. Any return values from queries are stored in a *java.sql.ResultSet object*. JDBC also allows stored procedures to be called using the *java.sql.Statement*, *java.sql.PreparedStatement* and *java.sql.CallableStatement* classes.

Implementation strategies using Java

Because of the relatively recent development of Java the designers have had to devise ways to make it compatible with existing DBMS systems without the need to re-code servers or drivers. The result is that there are several methods you can use to implement a JDBC solution for database connectivity. When implementing client-derver DBMS systems over networks using Java, developers have three main paradigms to choose from. One Tier, Two Tier or Three Tier systems are the three types of paradigm with the JDBC-ODBC bridge being a popular choice for Two Tier developments.

One Tier systems are only seen when the Database driver is written in Java code. When in use, the One Tier system has the client code, JDBC driver and JDBC driver manager all located on the client machine. They are either stored there or downloaded to the machine (if accessing from the WWW, for instance). The client program then directly interacts with the DBMS through JDBC function calls. While this is the best and easiest system to implement, the reason that this approach is not very common at the moment is that very few JDBC drivers exist, written purely in Java. While this will slowly cease to be a problem, at the moment other methods are needed.

Two Tier systems are seen where the JDBC Driver uses a native code library to translate JDBC functions into the specific DBMSs query language. This system has the client code, JDBC driver and driver manager on the client machine. The system then uses the native code library to connect to the DBMS and begin transactions. The problem with this is that the native code library is platform dependent and therefore negates the benefit of Java's "hardware independence". Therefore, this particular paradigm is unsuitable for WWW applications, as the native code library is not subject to the same security checks that the Java compiler and run-time engine perform on all applets. This approach can be used in a network situation where the platform is the same throughout the entire network.

The Three Tier system has the same components residing on the client system. The difference lies in the server system. In this case the client actually opens a connection (session) to the native code library (gateway). This library then connects to the DBMS and begins transactions. Because the native code library acts like a server, it negates the problem that prevents the Two Tier system from functioning over the WWW. However this approach does present a bottleneck - as all requests to the DBMS go through the gateway it may become flooded with requests and may slow down performance significantly. Often hosting the gateway on a dedicated server machine can alleviate this. This approach is often used, as it quickly ebables vendors to provide JDBC implementations using existing drivers for their DBMSs.

The JDBC-ODBC bridge is a Two Tier approach that uses JDBC function calls to access the database. However, before these calls are transmitted to the DBMS they are translated to an ODBC function call by the Java JDBC-ODBC bridge. This enables Java client programs to use existing ODBC drivers without any additional effort or cost. Because almost all databases provide ODBC compliance this bridge between standards is a very useful feature in the language. As developers write programs for existing databases they can make use of the JDBC-ODBC bridge and in the future, when they wish to change to pure JDBC drivers, very few changes will need to be made.

Choosing an implementation strategy

When choosing an implementation strategy for your client-server database there are several considerations that need to be addressed, if you are using Java. The first consideration is which database you are going to be using, and are the necessary JDBC drivers available for your platform. Although Java is "platform independent" many of the existing drivers are merely Java wrappers (interfaces) around existing C or C++ code. The result is a platform-dependent driver.

Another consideration is that many DBMSs have extensions to the standard SQL interface in-built to them and if you wish to access these extended features then the JDBC driver will need to support them. The JDBC-ODBC bridge supports many of these features and therefore your driver must support this.

When developing commercial DBMS systems the scalability and performance of the database is an important issue and many Two Tier approaches are inherently inflexible. You may wish to look at a Three Tier approach that enables a server to mediate between the clients and the DBMS.

Java has built-in support for multi-threading applications and taking advantage of this feature can drastically improve the performance of your DBMS. Threads allow the Java program to handle many requests at the same time, with the ability to protect against conflicting operations also possible through synchronisation. Many JDBC drivers that are not written in pure Java may not provide support for multi-threading applications and therefore the benefit will be lost. If your driver does not support threads then you may wish to look at the Three Tier approach as is allows your client programs to use threads to communicate with the gateway, while the gateway handles the single thread interaction with the DBMS.

Other concerns that may be of interest are the security of the data stream and security for individuals. Security of the data stream is commonly implemented by encryption techniques when transmitting the data between the client and the server along a network. Security for he individual refers to the use of passwords to limit access to the DBMS. When potentially dealing with housands of users, having the DBMS handle these can be wasteful of resources, so it is often better to have a different server handle these features. Both these issues can be handled in a Three Tier approach but may not be supported in a Two Tier approach.

Basic implementation using Java

There are four basic steps to connecting to a database using Java JDBC technology:

- Make a connection to the database
- Send an SQL statement to the database
- Process the return values from the database
- Close the connection to the database.

To open a connection to a database we must use the DriverManager class. This class manages all of the drivers that are used to connect to various databases. When connecting to a specific database the DriverManager class must have the relevant Drivers, whether they are ODBC or JDBC, registered with it. The Java code to create a connection might look like this

```
Connection dbConnect =
DriverManager.getConnection
("jdbc:odbc:DB1","scott",
"tiger");
```

This line uses the DriverManager class to open a connection to the database, in this case an ODBC driver for an Oracle Database, and then returns a connection object which can then be used by the following steps. The next step is to create a statement object that can then be used to execute an SQL statement on the database.

```
Statement dbSelect =
dbConnect.createStatement();
```

This statement actually creates a blank statement that is then used to retrieve records in the next step.

```
ResultSet dbResults =
dbSelect.executeQuery("SELECT
* FROM students");
```

The returned ResultSet can be stepped through to perform any processing that the user may wish. The final step of the process is to close the connection to the database. This is done using the following lines

```
DbSelect.close();
DbConnect.close();
```

The Java code above assumes that the various networking interfaces have already been implemented. The DriverManager class can only open a connection to a database that it has a link to. This means that the database must either be on the local machine or have an open network link to the relevant sever machine.

Conclusion

Using Java to implement DBMS clients and develop DBMS systems has a number of benefits over other conventional program languages. These benefits arise out of the basic features in-built to the Java Language. With the in-built networking features, threading, and the hardware independent nature of its programs, Java is much quicker and easier to write programs in when developing client-server systems, as they need to use these features.

The ability to use One Tier solutions and Three Tier solutions to provide the ability for users to access the database over the World Wide Web is a big advantage as many companies are now looking into the e-commerce market. The ability to access a DBMS from the Web allows companies to provide essential data to customers quickly and easily. It also means that employees could potentially work from home with great ease as Java already solves most of the problems relating to security and transmission of data.

Perhaps the most important benefit of using Java to develop and implement DBMSs is the ever-increasing number of IT professionals who are able to use it. The increasing numbers of programmers and analysts who are familiar with the Java language means that developments using Java will not have problems with qualified staff to manage or support the project.

References

Client/Server Architecture
http://www.dgsys.com/~dcasug/sysbintro/csarch.html

Choosing a Java Database Connectivity Driver
http://www4.weblogic.com/docs/techoverview/jdbc.html

Java in the Database
http://www.devx.com/upload/free/features/javapro/1999/03mar99/kn0399/kn0399.asp

Data Access Roadmap
http://ourworld.compuserve.com/homepages/Ken_North/dataacce.htm

Overview of JDBC API
http://java.sun.com/products/jdbc/overview.html

The Future of Enterprise Database access with JDBC
http://ww.i-kenetics.com/wp/futurejdbc/futurejdbc.htm

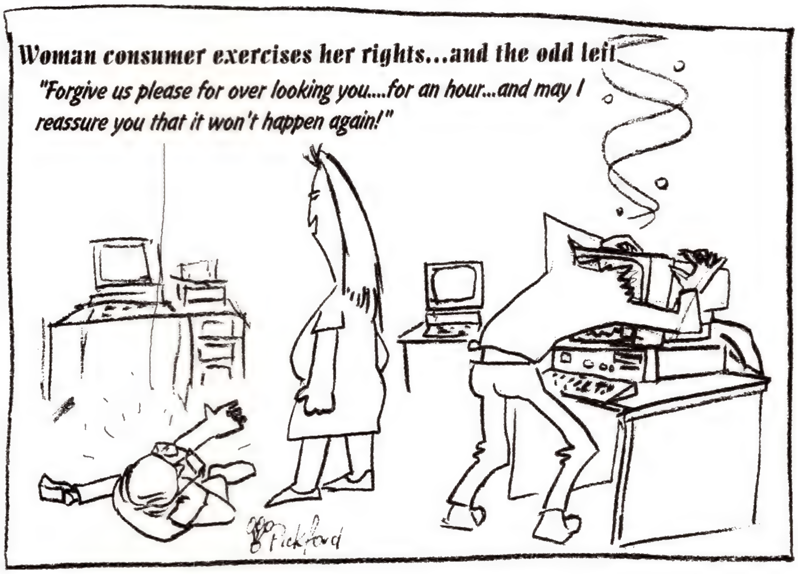
JDBC FAQ
http://java.sun.com/products/jdbc/jdbc-frequent.html

Borland Teach yourself JBuilder in 14 Days Michelle M. Manning, Sams Net Borland Press, 1997

WWW Programming in Java
Database Connectivity, Heinz Schmidt, 10/8/1998
http://www.sd.monash.edu.au/sft3200/Lectures/Module11/DBConnectivity.html

About the authors

John Grant is completing his Bachelor's Degree in Computing at Monash Caulfield, Xiaoya Lin is doing research in rule-based systems towards his Doctorate and Noel Craske is a Senior Lecturer at Monash. ❑


Woman consumer exercises her rights...and the odd left
"Forgive us please for over looking you....for an hour...and may I reassure you that it won't happen again!"
Pickford

Melb PC surveys

Ash Nallawalla

If you prefer not to damage your copy of *PC Update*, a photocopy of these pages is acceptable.

Please take a few moments to complete these anonymous surveys. They will enable our group to offer a better service.

Membership survey

Please take a few moments to complete our anonymous membership survey. Please note that some activities have not taken place for some time or may be proposed activities. You can also submit these surveys online at http://www.melbpc.org.au/surveys/.

Membership

1) For how many years have you been a member? Say 1 if less than 1.

____

2) How did you find out about the Melbourne PC User Group (Melb PC)?

☐ PC Update
☐ Home Page
☐ Training course
☐ SIG meeting
☐ Software manufacturer
☐ Relative/Friend/Colleague
☐ Stand at PC Show
☐ Newspaper article
☐ TV show
☐ Other (please specify):
☐ Other magazine
☐ Melb PC BBS
☐ Monthly meeting
☐ PC sales outlet
☐ Hardware manufacturer
☐ Computer swap meet
☐ Advertisement
☐ Radio show
☐ Educational institution

____

3) What was the original, primary reason for you to join Melb PC?

☐ Gift
☐ PC Update
☐ User group BBS
☐ Monthly meeting
☐ Camaraderie
☐ Bundled with PC
☐ Internet service
☐ Training course
☐ SIG meeting
☐ Other (please specify):

____

4) Today, what is the primary reason for you to REMAIN a member of Melb PC?

☐ PC Update
☐ User group BBS
☐ Monthly meeting
☐ Camaraderie
☐ Internet service
☐ Training course
☐ SIG meeting
☐ Other (please specify):

____

5) How does the current user group membership fee (not Internet service) represent value for money?

☐ Poor ☐ Fair ☐ Good
☐ Very good ☐ Excellent

Additional comments:

____

6) How does the current Internet service fee represent value for money?

☐ Poor ☐ Fair ☐ Good
☐ Very good ☐ Excellent

Additional comments:

____

7) Will you renew your membership? If not, explain in comments field.

☐ Yes ☐ No ☐ Don't know

Additional comments:

____

Relevance of activities and services to you

Please rate the relevance to you of each activity and service that we provide. Please write a number from 0 to 5 for each service/activity.

5 = Main reason for staying a member
4 = High relevance to me
3 = Moderate relevance to me
2 = Some relevance to me
1 = No perceived relevance to me
0 = Don't know what this means

8) PC Update __________
9) BBS __________
10) Internet service __________
11) Monthly meeting __________
12) SIGs __________
13) Special pricing (bulk buys) __________
14) Blank disk sales __________
15) Shareware library __________
16) Bulk shareware registration __________
17) Training courses __________
18) Dial Help __________
19) First-Aid line __________
20) Book library __________

Quality of activities and services

3 = Improving
2 = No change
1 = Declining
0 = Have not used service in past six months.

21) PC Update content __________
22) PC Update delivery __________
23) Internet service price __________
24) Internet service accessibility __________
25) Internet service connectivity __________
26) BBS files __________
27) BBS messaging __________
28) Monthly meetings __________
29) SIG meetings __________
30) Bulk buy prices __________
31) Blank diskette prices __________
32) Bulk shareware registration __________
33) Shareware library selection __________
34) Training courses __________
35) Dial help volunteers __________
36) First Aid line __________
37) Book library __________

Usage of services

38) Which Melb PC services have you used IN THE LAST SIX MONTHS? Check all that apply.

☐ Blank floppy disk sales
☐ BBS message areas
☐ First Aid Line
☐ Shareware from office
☐ Shareware at monthly meeting
☐ Internet service
☐ BBS files areas
☐ Dial help
☐ Monthly meeting
☐ SIG meetings
☐ Book library
☐ Training courses

39) Which Melb PC services have you EVER used? Check all that apply.

☐ Blank floppy disk sales
☐ BBS message areas
☐ First Aid Line
☐ Shareware from Office
☐ Shareware at monthly meeting
☐ Internet Service
☐ Shareware bulk registration
☐ BBS files areas
☐ Dial help
☐ Monthly meeting
☐ SIG meetings
☐ Book library
☐ Training Courses
☐ Bulk purchases

40) How often (days in a year) are you likely to attend a Melb PC monthly meeting?

____

41) (Three-part question) Which week of each month is convenient to you to attend a monthly meeting? Check all that apply.

☐ None ☐ First ☐ Second
☐ Third ☐ Fourth ☐ Last

42) (Three-part question) Which day of the week is convenient to you to attend a monthly meeting? Check all that apply.

☐ None ☐ Sunday ☐ Monday
☐ Tuesday ☐ Wednesday ☐ Thursday
☐ Friday ☐ Saturday

43) (Three-part question) Which part of Melbourne is convenient to you to attend a monthly meeting? Check all that apply.

- ☐ Present location
- ☐ East
- ☐ South
- ☐ West
- ☐ North
- ☐ 5 km from downtown
- ☐ South-east
- ☐ South-west
- ☐ North-west
- ☐ North-east

44) How often (days in a year) are you likely to attend a Melb PC Special Interest Group (SIG) meeting?

45) How often (days in a year) are you likely to visit Melb PC's premises in Dorcas St?

46) To help us plan the best times for training courses please indicate all of the times that are convenient for you.

- ☐ None
- ☐ Saturday
- ☐ Week days
- ☐ Sunday
- ☐ Week nights

47) Which of the following training courses would you attend at Melb PC?

- ☐ Not interested
- ☐ Word Processing
- ☐ BBS
- ☐ MS-DOS
- ☐ Windows 95
- ☐ Windows NT
- ☐ OS/2
- ☐ Business finance
- ☐ Graphics
- ☐ C++
- ☐ Other (please specify):
- ☐ Database
- ☐ Spreadsheet
- ☐ Internet
- ☐ Windows 3.x
- ☐ Windows 98
- ☐ UNIX
- ☐ Personal finance
- ☐ Personal productivity
- ☐ Computer Basics
- ☐ Virus protection

48) What is your perception of the COVERAGE of Melb PC training courses?

- ☐ No experience
- ☐ Good
- ☐ Poor
- ☐ Very good
- ☐ Fair
- ☐ Excellent

Additional comments:

49) What is your perception of the QUALITY of Melb PC trainers?

- ☐ No experience
- ☐ Good
- ☐ Poor
- ☐ Very good
- ☐ Fair
- ☐ Excellent

Additional comments:

50) In the previous two questions, what is the basis of your perception and how old is this perception?

- ☐ None
- ☐ Anecdotal < 1 yr
- ☐ Attendance < 1 yr
- ☐ Anecdotal > 1 yr
- ☐ Attendance > 1 yr

51) Most Melb PC courses cost $15/hour and range between $30 and $180 (one is free!). How do you consider our prices?

- ☐ Easily affordable
- ☐ Slightly out of reach
- ☐ Affordable
- ☐ Way out of reach

Additional comments:

Computer usage

52) How many hours a week do you use a computer for business activities?

53) How many hours a week do you use a computer for non-business activities?

commerce (Internet and other)

54) Have you ever purchased goods or services over the Internet?

☐ Yes ☐ No

55) Would you renew membership or pay for other goods or services from Melb PC if we implemented a secure server?

☐ Yes ☐ No ☐ Don't know

Additional comments:

56) Would you buy a new computer if it were bundled with the Internet service and Group membership, for, say, $40-50 per month over some period?

☐ Yes ☐ No ☐ Don't know

57) Check all other AUSTRALIAN computer magazines (not PC Update) you read regularly, that is, two out of three issues.

- ☐ Age (Tuesday)
- ☐ Australian (Tuesday)
- ☐ Aust Reseller News
- ☐ communique
- ☐ Computerworld
- ☐ Digital Media World
- ☐ Herald-Sun (Connect)
- ☐ LAN Corporate IT
- ☐ NT Magazine
- ☐ PC Buyer
- ☐ PC Magazine
- ☐ PC User
- ☐ PC World
- ☐ School PC
- ☐ What's New in Computing
- ☐ Your Computer
- ☐ Age (Green Guide)
- ☐ Aust Personal Computer
- ☐ CAD User
- ☐ Computer Reseller News
- ☐ Desktop
- ☐ Electronics Australia
- ☐ Internet.au
- ☐ NetGuide
- ☐ PC @uthority
- ☐ PC Gamer
- ☐ PC Power
- ☐ PC Week
- ☐ PowerPlay
- ☐ Silicon Chip
- ☐ Windows Sources
- ☐ Other (Please specify):

Policy

This section seeks your input on present and future policy.

58) Is there a topic that ought to be covered by a Special Interest Group and is not?

59) If Melb PC were to buy or rent additional premises (to conduct meetings) in the suburbs, which localities suit you? Check all that apply.

- ☐ East
- ☐ South-west
- ☐ North
- ☐ South-east
- ☐ West
- ☐ North-east
- ☐ South
- ☐ North-west

Additional comments:

60) What new services should the Group offer?

Internet survey

A "discretionary" account in this survey refers to a personal account that you chose to open as opposed to an Internet connection provided by your organisation (even if you run your own business).

User profile

1) What Internet features do you use? Check all that apply.

- ☐ Web
- ☐ Newsgroups
- ☐ Phone
- ☐ Video camera
- ☐ Other (please specify):
- ☐ E-mail
- ☐ Chat
- ☐ Still camera
- ☐ File transfer

2) What are your uses for the Internet? Check all that apply.

- ☐ Business
- ☐ Research
- ☐ Entertainment
- ☐ Pleasure
- ☐ Software downloads
- ☐ Other (please specify):

3) List the types of Internet access accounts you have. Check all that apply.

- ☐ Melb PC
- ☐ Work
- ☐ High School
- ☐ Other Tertiary
- ☐ Other (Please specify):
- ☐ Other ISP
- ☐ Primary School
- ☐ University
- ☐ Public Library

4) How many Internet access accounts do you have? (If you have, say, three logins in the same organisation, count them as one account.)

5) In respect of your discretionary (not forced upon you, e.g. by employer) Internet access accounts, name your favourite (just one) provider.

6) Why is the above ISP your favourite? Check all that apply.

- ☐ Fast
- ☐ Low spam
- ☐ Busy signals rare
- ☐ More newsgroups
- ☐ ISP doesn't care what I do
- ☐ Proxy server is optional
- ☐ ISP has sensible restrictions
- ☐ Cheap
- ☐ Few drop-outs
- ☐ Includes Web space
- ☐ More mail quota

Additional comments:

7) Which company provides your primary modem line?

☐ Telstra ☐ Optus ☐ Don't know

Modems

8) What is the BRAND of your main modem?
e.g Netcomm, US Robotics?

9) What is the MODEL of your main modem?
e.g. Optima 336, Netcomm 1234

10) What is the speed of your main modem in bits per second?

☐ 9600 or less ☐ 14,400
☐ 28,800 ☐ 33,600
☐ 56,000 V.90 ☐ 56,000 K56Flex
☐ 56,000 X2 ☐ ISDN modem
☐ Cable ☐ No modem/Don't use
☐ Don't know

Other ISP Services

11) Did you ever sign up for free Internet access elsewhere, e.g. Big Pond, AOL, etc?

☐ Yes ☐ No

12) If you answered "Yes" to the above question, did you continue with that service on a paid basis? Otherwise, skip this question.

☐ Yes ☐ No

Melb PC subscribers only

Nonsubscribers should go to question 32. Thank you.

13) Check each year that you had/have a Melb PC Internet account.

☐ 1999 ☐ 1998 ☐ 1997
☐ 1996 ☐ 1995 ☐ 1994

14) What are the first four digits of your modem's phone number, (e.g. 9741)? This will help us determine if certain suburbs/exchanges have a problem.

15) What is the typical connect speed in bps, if known?

☐ 14,400 or less ☐ 16,800 ☐ 19,200
☐ 21,600 ☐ 24,000 ☐ 26,400
☐ 28,800 ☐ 31,200 ☐ 33,333
☐ 33,600 ☐ 37,333 ☐ 38,400
☐ 41,333 ☐ 42,666 ☐ 44,000
☐ 45,333 ☐ 46,666 ☐ 48,000
☐ 49,333 ☐ 50,666 ☐ 52,000
☐ 53,333 ☐ 54,666 ☐ Don't know

16) Which are your favourite Internet dialup numbers? Check all that apply. (9934 9400 is K56Flex; 8626 5000 is the experimental V.90; 9686 4506 is 33.6 kbps. If you don't know which number your PC dials or that you have a choice, select "Huh?")

☐ 9934 9400 ☐ 8626 5000
☐ 9686 4506 ☐ Huh?

17) How often do you encounter engaged tones when trying to connect?

☐ Never ☐ Rarely ☐ Frequently
☐ Often ☐ Always

Additional comments:

18) How often do you get disconnected involuntarily?

☐ Never ☐ Almost never
☐ About once a month ☐ About once a week
☐ Few times a week ☐ Almost daily
☐ Daily

19) After how many minutes into a session do you usually get disconnected?

☐ It varies ☐ Within a few minutes
☐ Within a quarter of an hour
☐ In the first hour ☐ After about two hours
☐ After time used up

20) If you redial immediately after a disconnection, how long does the session last?

☐ It varies ☐ Within a few minutes
☐ Within a quarter of an hour
☐ In the first hour ☐ After about two hours
☐ After time used up

21) You have two hours of full Internet access. In addition to this, do you use:

☐ Intranet ☐ Extended time trial

Additional comments:

22) At what time do you access the service? Check all that apply.

☐ 01 am ☐ 02 am ☐ 03 am ☐ 04 am
☐ 05 am ☐ 06 am ☐ 07 am ☐ 08 am
☐ 09 am ☐ 10 am ☐ 11 am ☐ Noon
☐ 01 pm ☐ 02 pm ☐ 03 pm ☐ 04 pm
☐ 05 pm ☐ 06 pm ☐ 07 pm ☐ 08 pm
☐ 09 pm ☐ 10 pm ☐ 11 pm ☐ Midnight

23) Would you/can you connect at a different time if additional access time was provided during off-peak hours? (e.g. morning instead of night)

☐ Yes ☐ No ☐ Don't know

Additional comments:

24) Did you ever leave to find a "better" Internet service for a period and come back (or did you come here after trying another provider)?

☐ Yes ☐ No

Additional comments:

25) Are you aware of the "Online files" available for download?

☐ Yes ☐ No

26) If you answered "Yes" to the previous question, how often do you use that service? Please add your comments if any.

☐ Daily ☐ Weekly ☐ Fortnightly ☐ Monthly

Additional comments:

27) Have you used the Melb PC Internet configuration kit? If you answer "Yes", please add your comments on it, it any.

☐ Yes ☐ No

Additional comments:

28) How many other people have joined the Melb PC service as a result of your recommendation?

29) Rate the technical support you get from the Help alias. (This refers only to problems with your Internet connection, not generic questions.)

☐ No experience ☐ Poor ☐ Fair
☐ Good ☐ Very good ☐ Excellent

30) Rate the technical support you get from fellow members.

☐ No experience ☐ Poor ☐ Fair
☐ Good ☐ Very good ☐ Excellent

31) Are you likely to renew your Internet subscription? If you did not choose "Yes", please tell us why in the comments field.

☐ Yes ☐ No

Additional comments:

32) Have you any other comments?

Thank you for completing these surveys! The results will be published on our Web site and in PC Update.

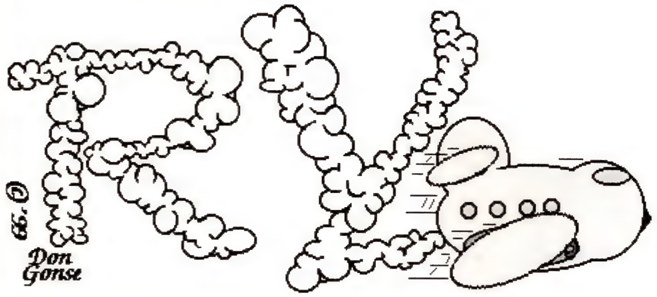
Please send to:
Reply Paid Permit 261
Melb PC Surveys
PO Box 283
South Melbourne VIC 3205

or deliver to the office at:

27 Dorcas Street
South Melbourne VIC 3205 ❑

Humorous Bits

by Don Gonse



To be competitive, Roy got himself a new "bubble jet printer".

Cartoons free to User Groups with credit to Don Gonse.

Request images from Don at degonse@juno.com.

MELB PC USER GROUP

GROUP SERVICES

Members' free ads

WANTED

andbook for Olivetti JP-50 rinter.

hilip 9807 9096 (AH), *johnsto@melbpc.org.au*

eeking a paper feeder ttachment for a Canon J-10sx bubble jet printer. No longer made by Canon). Vill buy with printer ttached if no other option.

rish (03) 5776 9616 or -mail *risht@mansfield.net.au*

FOR SALE

ita Hayworth video ollection, unopened, 8 ideos. $80

hris 9315 6569, or e-mail hris_malady@hotmail.com

uMega Dev Partner Studio, ersion 6.1, a Smart ebugging companion for MS Visual Studio using isual C++, Visual Basic or Java. Brand new unopened won as prize). ERP is $1810 —will sell for $1500.

Harley 9570 8839 (BH & AH)

Sony editing VCR, SLV-E1000 AS/NZ Jog/Shuttle, insert editing. As new. $1200 ono

5980 1234 or email tosh@telstra.easymail.com.au

CleanSweep V3. CD with manual. $20

MS Press. Windows 95 Step by Step, with FD. $20

Jim 9531 1465

Hardware:

486/66 with 16 MB RAM, 1.2 GB HD, 3.5 FDD, PS/2 mouse, Keyboard, Network card. Windows 3.11. $220 ono

486/66 with 8 MB Ram, 170 MB HDD, 3.5 FDD, mouse, keyboard, Windows 3.11—no monitor. $100

HP 660C colour inkjet printer. Comes with manuals, drivers and several spare cartridges. Needs servicing. $60

Software:

1999 World Book Encyclopedia. Unopened CD and manual in box. $45

Aldus PhotoStyler v.2 for Windows. Professional graphics software. CD and user guide in unopened pack. $30

Microsoft Money 98. CD and manual in unopened pack. $25

Lotus Smart Suite 97. CD and all documents in unopened pack. $35

Quartdeck Internet Suite v.2 for Windows 3.1 and 95. A suite in internet applications which includes email, FTP, IRC, telnet, Mosaic WWW browser, newsgroup reader, and Cybersitter and some other extras. CD, 300 page manual and all other documentation in box, as new. $20

OS/2 v2.1 In box and unused. The 20 disks are still in sealed packs. $15

Box of Microsoft Evaluation CDs: Windows NT Server 4, Windows NT Server 4 Information Centre, SNA Server, SQL Server Internet Information Server 3. These have 120-day evaluation license. Includes documentation, CDs and disks. All unused and as new. $25

InfoMagic Linux Developer's Resource (Sept 1996). 6 CDs. $15

Games:

A-10 Cuba! (Flight Sim) CD. $10

Edmark Imagination Express —Rain Forest. $15

Edmark Stratergy Challenges. $15

Books:

Making the Most of MYOB —The Basics and Beyond. (MYOB for Australian and NZ Users). (Woodslane). $25

Idiots Guide to Microsoft Access 97 (Que). $20

Windows 98 for Dummies (IDG). $20

More Windows 98 for Dummies (IDG). $25

Master Windows 98 Visually (IDG Books). This book retails for. $80 and boasts over 700 pages which cover all aspects of Windows 98 from "Getting Started" to Disk Management and Networking. It has some 1200 screen shots and includes a CD-ROM that contains a copy of the book in Acrobat (.PDF) format. The CD also contains Trial Versions of WinFax Pro v.8, Cleansweep, First Aid and Oil Change. The CD is unopened and the book as "as new". $40

MCSE Training Guides for Windows NT Workstation 4. Microsoft approved guide published by New Riders with (unopened) CD-ROM. As new hardback (RRP $100). $35

Website Sound—adding sound and audio feeds to your website. (New Riders). $15

Laura Lamey's Web Workshop—NetObjects Fusion 2. (Includes tutorial CD) (Sams). $20

Protection and Security on the Information Superhighway (Frederick B Cohen). $10

Adobe Photoshop 3—Filters and Effects. Comes with CD and 3rd party plug-ins (New Riders). $25

Fine Art Photoshop—Lessons in digital drawing and painting. (Hayden Books). $25

Dreamweaver 1.2—Visual Quickstart Guide (Peachpit Press). $15

The Australian Internet Book —1999 Edition. Comes with 50 Hours Free Ozemail Internet CD (unopened). (Woodslane Press). $25

Using Internet E-mail—Special Edition Complete Reference book (680 pages). (Que). $25

Upgrading and Repairing PCs —Eighth Edition. Over 1100 pages of information plus unopened Technical Bookshelf CD. Book is as new—Published by Que (1998) (RRP $99). $40

Computers Today and Tomorrow. Excellent full-colour reference book on computers and how they work. Comes with (unopened) CD. Published by Que (1998) (RRP $70). $30

John 9557 1535 or jv@melbpc.org.au.

Hey! Watch where you're going!
Gruhn

Noncommercial advertisements from members, for Swap, Wanted, For Sale, Free, etc, are run free of charge.

Advertisements can be submitted in any of the following ways:

- Uploaded as a file (NB: not a message) to the BBS in ASCII format to area PCUP
- E-mailed to prod-mgr@melbpc.org.au
- Mailed to the Production Manager (see page 2) as an ASCII file on a non-returnable MS-DOS diskette
- Delivered to the Group's Office as an ASCII file on a non-returnable MS-DOS diskette, but as these are collected infrequently you may miss a deadline.

Please follow the format shown, i.e. description (unformatted) followed by price, for as many items as you wish. Follow this with your optional name, mandatory phone number and other contact details.

Advertisements must include at least one phone number—if you only want replies via the BBS or Internet, only advertise there.

We do not have the time to type your ads, so this service is only available for electronic ads.

Infected disks are thrown away, with no attempt to disinfect or recover data!

Members' ads will be included in the first available issue of *PC Update*. ☐

TRAINING SERVICES

Courses: July — August

Application courses

Quicken for Small Business $180

Viv Martin
Four 3-hour sessions.
6.30 pm–9.30 pm,
Tue 10, 17, 24, 31 Aug.
Bookkeeping, record keeping, producing reports for accountants using Quicken or Quicken for Business.
Prerequisites: Basic Windows experience. Ideally, ownership of the latest Australianised version of Quicken for Windows.

Starting Quickbooks $180

Viv Martin
Four 3-hour sessions.
6.30 pm–9.30 pm,
Tue 13, 29, 27 Jul, 3 Aug.
This course is for people who have started to use QuickBooks and want to gain further benefits from the package.
Prerequisites: Must understand the concepts of double-entry bookkeeping, and be familiar with Windows. Ideally, ownership of the latest Australianised version of Quickbooks for Windows.

Courses by request

These courses are available by request subject to minimum student numbers. Please register your interest with the office.

- **QuickBooks**
- **Office 97 overview**
- **Communications workshop**
- **Housekeeping a computer**
- **Memory management**
- **Virus protection and recovery**
- **Overview of Windows 95**
- **Writing batch files**
- **Using the Internet with Windows 3.x**
- **Computer Basics.**

Introduction to PowerPoint $45

Caroline Houston
One 3-hour session.
6.30 pm–9.30 pm, Thu 15 Jul.
An introduction to the capability of the tools, using the templates and wizards, creating graphics and creating standard slides. Students will create presentations that can be given as on-screen shows or printed for use on an overhead projector. This course is a must in preparation for your next meeting/ conference delivery.
Prerequisites: Familiarity with Win 9x including mouse and keyboard skills.

Intermediate PowerPoint $45

Caroline Houston
One 3-hour session.
6.30 pm–9.30 pm, Thu 19 Aug.
A more in-depth perspective to creating presentations using enhanced graphics and special transformations from slide to slide. Students will create presentations that can be given as on-screen shows or printed for use on an overhead projector. This course is a must in preparation for your next meeting/ conference delivery.
Prerequisites: Familiarity with Win 9x including mouse and keyboard skills. This course also assumes familiarity with Powerpoint in creating basic slides and basic graphics or attendance at the Introduction course.

Introduction to Access 8/97 $162

Peter Fallon
Three 3-hour sessions.
6.30 pm–9.30 pm,
Wed 11, 18, 25 August.
Introduction to database concepts. Learn how to create an access database, and build simple queries, forms and reports. Most importantly, how to use the online documentation, and where to go for information when you need it.
Prerequisites: Prior knowledge of databases or Access is not required. A working knowledge of Win 9x is assumed.

Introduction to Microsoft Word $75

Caroline Houston
One 3-hour session.
6.30 pm–9.30 pm, Thu 8 Jul.
Learning Outcomes:
On the completion of this course students will be able to
** create, save and edit documents*
** enhance a document using simple features*
** set up and manage a workable file system*
This course will give a basic grounding in Word - an essential for new starters in word processing. Designed for complete novices and those who feel that they may benefit from a short formal course.
Materials
A course manual is provided, but students should bring their own pens and paper for additional notes. A formatted floppy disk may also be useful if students wish to take home exercise files.
Prerequisites: Familiarity with the Windows environment including mouse and keyboard skills at a basic level.

Using Microsoft Word 7 $75

Caroline Houston
One 3-hour session.
6.30 pm–9.30 pm, Thu 5 Aug.
This course will include setting Tabs, inserting graphics, multiple page documents with headers and footers and creating tables.
Materials
A course manual is provided, but students should bring their own pens and paper for additional notes. A formatted floppy disk may also be useful if students wish to take home exercise files.
Prerequisites: Familiarity with the basic functions of Word.

Internet courses

Note: If you are starting with minimal knowledge, we suggest that the Internet courses are best attended in the sequence shown. More advanced students should attend at their skill level.

1. Introduction to the Internet $45

Lynn Pollock
One 3-hour session.
9.00 am–12 noon, Sat 17 Jul.
An overview of the Melb PC Internet service. Live explanations of all the major programs that make up the Internet. Full detailed discussion of the hardware and software items involved, including modems. General questions concerning Internet connections.
Prerequisites: None.
See also: File management, archiving and compression techniques.

2. Using the Internet with Windows 95/98 $90

Lynn Pollock
One 6-hour session.
9.00 am–4.00 pm, Sun 8 Aug.
This is the basic course for Win 9x users. It suits people about to install Win 9x Internet software or novice users of the Internet who want a full explanation of the basic setup and techniques involved. Hands-on individual installation of 32-bit Internet software. Explanation, discussion and live student Internet connections to demonstrate and practise all the major components.
Prerequisites: Win 9x experience.

3. Advanced Internet Part 1: Effectively using Web browsers $60

Lynn Pollock
One 4-hour session.
1.00 pm–5.00 pm, Sat 17 Jul.
Complete examination and discussion of all the features in the latest versions of both Netscape and Internet Explorer. Configuring, bookmark and favourite management, saving images and data, offline viewing of saved information, effective use of search engines and techniques, and tips and tricks. Students have live Internet connections to practise their searching techniques.
Prerequisites: Students should have attended the basic Internet course or have a good understanding of Internet principles. This is an advanced course.

4. Advanced Internet Part 2: Internet Workshop $90

ynn Pollock
ne 6-hour session.
00 am–4.00 pm, Sun 18 Jul.
omplete discussion and live student ternet connections examining all the atures that make up the Internet day, with the exception of Web rowsers. Students will gain experience ith the following: Advanced e-mail, TP, Archie, Gopher, Finger, Telnet, IRC etwork, Internet Phone, newsgroups nd list servers, also connection roblems and tips and tricks.
rerequisites: Students should have ttended the basic Internet course or ave a good understanding of Internet rinciples. This is an advanced course.

Info Box

Where are courses held?

At the group's premises, usually in the Training Room. Some courses are held in the SIG room so check when you arrive.

The address is
27 Dorcas Street (Cnr of Wells Street),
South Melbourne VIC 3205

How do I get there?

Usually plenty of parking is available nearby in the evenings or at week- ends *or* tram to corner of St. Kilda Rd and Dorcas Street and walk one block down Dorcas Street.

Important!

You will obtain greater benefit from a course if you have the skills recommended by trainers as prerequisites for their courses. Otherwise, you may not be able to keep up with the class practical sessions.

How do I book a course?

Please use the order form on page 31 or (for credit card orders only) phone or fax the office (numbers on page 3).

Early enrolment is advised as places are limited.
Enrolments/bookings without payment will **not** be accepted.

I have something to say!

You can contact Training with suggestions for courses or other training-related matters by sending e-mail to Ian Rankin at *irankin@melbpc.org.au* ☐

Web Page Design $155

Steven Goldate
Three 3-hour sessions.
6.30 pm–9.30 pm,
Mon 16, 23, 30 Aug.
Students will learn how to write Web pages for the World Wide Web. This includes HTML (Hypertext Markup Language) basics, use of HTML editors, both text and WYSIWYG. Students will gradually be introduced into the inner workings of HTML, learning how to write simple Web pages, then progress to more complex features such as using tables, frames, embedding sound files, incorporating public domain JAVA applets, how to create online slide shows and more. The course will cover such issues as features of good Web-page design, FTP uploading issues and getting free stuff off the Net. Students will also learn about and look at directory structures in HTML and file uploading with FTP.
Prerequisites: Students should be familiar with the Internet, using a Web browser, have some basic editing skills and be familiar with Windows.

Operating system and hardware courses

How to Buy a Computer Free

Tom Coleman
One 3-hour session.
6.30 pm–9.30 pm, Thu 22 Jul.
What a computer does, what the jargon means, buying advice, tips and traps, no sales talk!
Prerequisites: None.

Housekeeping a Computer $45

Tom Coleman
One 3-hour session.
6.30 pm–9.30 pm, Mon 5 Jul.
Optimising disk space and minimising file loss or corruption. Avoiding data loss plus organising information.
Prerequisites: Familiarity with DOS command syntax, directory structure and file management and with computing terminology.

Hardware Upgrade and Repairs $90

Tom Coleman
One 6-hour session.
10.00 am–5.00 pm, Sat 10 Jul.
10.00 am–5.00 pm, Sat 14 Aug.
Students will be able to dismantle and re-assemble a computer, replace major components. Be aware of the basic "rules" and conventions of computer building. Know enough to get started on simple jobs.
Prerequisites: Familiarity with the basic functions of each of a computer's parts.

Hard Disk Installation $45

One 3-hour sssion.
10.00 am–1.00 pm, Sat 24 Jul.
Replacing or adding another hard disk. Master/Slave setup. Installation to older computers. Cabling. Trouble shooting and diagnostics. Options and alternatives. Students will be introduced to hard disk types, CMOS setup, partitioning, formatting and optimising setup.
***Materials:** Some practical hands on hardware is provided. Providing their own tools (screwdrivers) will help students. Students bringing in their own computers for upgrading or repair will inconvenience the class. Students should bring their own pens and paper for additional notes. There will be many extra items discussed in class so a degree of note taking may be necessary.*
Prerequisites: The course requires no more practical skill than using a screwdriver. The basics of hard disk set up and function is covered, but students with a more comprehensive knowledge of computing will get more out of this course.

Introduction to UNIX $45

Len Krois
One 3-hour session.
6.30 pm–9.30 pm, Thu 29 Jul.
UNIX/LINUX basics for people who want a basic feel for the open systems environment. LINUX is a popular shareware version of UNIX that will run on IBM-compatible PCs. The session includes logging onto a UNIX system, finding your way around, manipulating files, viewing and editing text files, using the online text manual.
Prerequisites: Command line computing knowledge preferred.

Starting Windows 95 $119

Mary Levens
One 6-hour session.
9.00 am–4.00 pm, Sun 11 Jul.
Introduces the computer novice to the concepts and skills required for effective use of the Win 95 environment. Covers basic Windows jargon and terminology, how to accomplish everyday tasks and how to change the way Windows looks and works. Students will receive a comprehensive exercise manual.
Prerequisites: None.

Advanced Windows 95/98 $90

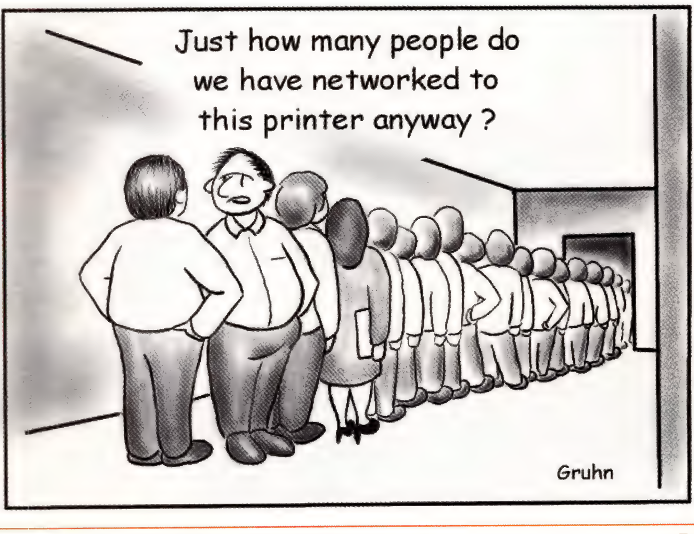
Lynn Pollock
One 6-hour session.
9.00 am–4.00 pm, Sat 7 Aug.
A full and detailed examination of Win 9x for experienced users. Topics include adding hardware, registry control and editing, backup techniques, communications, networking with Win 9x, conflict resolution, enhancing performance, system maintenance, and many tips and tricks.
Prerequisites: Win 9x familiarity.

Introduction to Networking $90

Len Krois
One 6-hour session.
9.00 am–4.00 pm, Sat 28 Aug.
How to connect two or more computers to share computer resources.
Prerequisites: Win 3.1x/9x familiarity.

Introduction to Windows NT4 $117

Maurice Canterbury
Two 3-hour sessions.
6.30 pm–9.30 pm, Mon 2, 9 Aug.
Introduction to the basics of a networking system and how users operate from the Workstation. Understanding of how the network is controlled and administered.
Prerequisites: Familiarity with Win 9x including mouse and keyboard skills. ☐


Just how many people do we have networked to this printer anyway ?
Gruhn

Deshani Rodrigo

Evolution of e-commerce

It is estimated that companies will spend $3.8 billion on electronic commerce (e-commerce) software in 2002. This is 16 times the 1998 forecast of $235 million, made by Forrester Research. The exponential growth of the Internet, together with the inevitable ongoing growth in the Information Technology (IT) field are two key factors for such a significant increase in forecasts.

E-commerce, in its present form, has revolutionised the way in which commercial transactions are conducted, allowing them to be processed over electronic networks. The introduction of e-commerce appealed to the masses, and its popularity is predominately due to its simplicity and the significant cost reductions resulting from it. However, these first-generation e-commerce systems have their limitations. Nevertheless, newly emerging technologies, in particular agent technologies, will profoundly change the way in which e-commerce will continue to take place in the information age. Moreover, there is potential for intelligent agents to become the most efficient sales reps ever.

This article looks briefly at the limitations of e-commerce in its present form, then proceeds to discuss the next wave of e-commerce: second and third-generation systems. Some companies are already starting to realise the potential of such implementations, but most of the work to date is in the form of research projects, not commercial applications. However, this is likely to change in the not too distant future, with second generation e-commerce becoming widely used.

The third generation e-commerce is an inevitable occurrence, although it may be years before the application of such ideas is seen. However, there is little doubt that this will be the next logical step to the evolution of e-commerce, and so the likely features of this system are briefly presented. In addition, the pros and cons of such systems are discussed, mainly in regards to security and privacy issues.

The article concludes with a discussion about the use of e-commerce in this way, until now unimaginable to many. It also discusses the social and legal impacts of the use of e-commerce to such an extent.

First-generation e-commerce

The introduction of the Web has provided many people with opportunities that were previously unimaginable. In particular, the first-generation e-commerce systems enabled many business functions to be conducted without large amounts of capital investment in buildings and other infrastructures. Presently, a successful business may be conducted with a virtual shopfront (Web site), using minimal staffing and resources for key functions. In this model businesses are provided with a more level playing field in which they are each judged by the appearance of their virtual shopfront and the quality of goods and services supplied.

e-commerce has revolutionised business

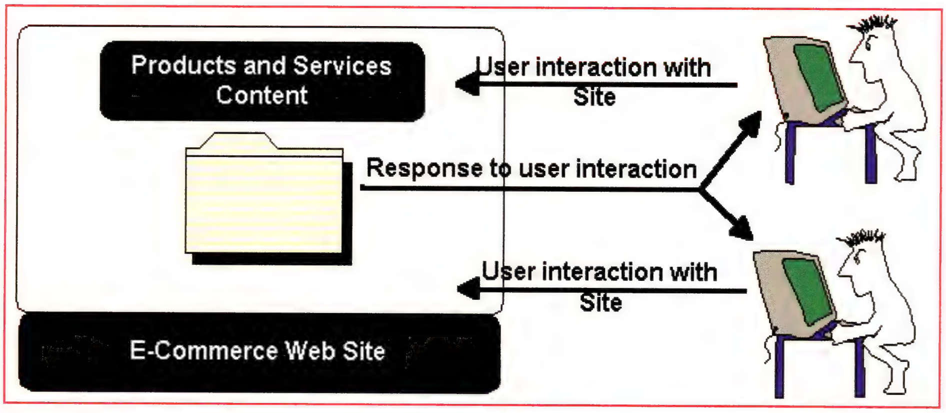

Products and Services Content
User interaction with Site
Response to user interaction
User interaction with Site
E-Commerce Web Site

Figure 1 First-generation e-commerce system

In addition, the introduction of e-commerce systems has been beneficial for consumers. Prices have been driven down due to the proliferation of streamlined businesses, leading to an increase in competition. As well as the huge cost reductions for businesses, first-generation e-commerce systems appeal to the masses due to their extravagant use of multimedia.

In hindsight, these early systems employed basic uses of multimedia. Initially most sites had several linked Web pages in which they advertised their various products and services. In some cases the less interesting Web sites had predominantly textual content whereas others made significant usage of flaming logo graphics, animations and the like. However, in spite of the various types of Web sites, in these first-generation systems there is very little that businesses can do to make consumers aware of their products and services.

Advertising of a Web presence through publicity of a URL (Uniform Resource Locator) does not always provide sufficient information about the organisation. Therefore, businesses often have little choice but to resort to inexpensive spam e-mail, or specialised mailing lists to inform potential consumers of their existence and products. These mass advertising approaches meant that marketing strategies were broad and unfocused, which sometimes had egative impacts. Consumers generally nd Web sites as a result of their own evices, looking for the products or rvices that are of interest, and then aking online purchase decisions.

esides having an appealing and easily avigable Web site, in first-generation ystems there is not much more that a usiness may do to assist in closing les. A simple example of such a ystem is an online bookshop that rovides all users with an identical esponse to their requests. A typical rchitecture of a first-generation system shown in Figure 1. It depicts similar te responses to diverse users, and eaves item searching and product atching to the users' discretion.

econd-generation e-commerce

econd-generation e-commerce systems re yet to be fully commercialised. hese technologies use stationary agents nd user profiling to further exploit the ower of e-commerce systems and help o implement user focused Web based arketing strategies. Their technical spects and details of stationary agents ave been deliberately omitted.

Here, users are supplied with more pecific e-mails, which present a more ersonalised marketing technique for elivery of vendor care or value-adds Figure 2). Information required for uch "personalised" advertising may be done through the formation of user rofiles. Such profile acquisitions may e either directly or indirectly obtained. acilities such as cookies may be used or monitoring users' browsing patterns nd inclusion into their profiles.

However, this may soon be a method of the past as users are exploring ways n which to "browse undercover" so hat minimal data is available from the rowser. Alternatively, direct information extraction may include users filling out registration forms, or other forms hat give some information about them. In these evolving second-generation systems information will be added to user profiles based on all user interactions with the system. These profiles will then be used during subsequent sessions, or in real-time to present users with specific information about products and services. This type of behavioural knowledge may be used for personalised e-mail advertising or customised Web pages.

Since Web pages are created dynamically upon request, the server may customise them at the time of construction. Through the use of cookies or user site logins, much of this information may be gathered and incorporated into e-mails or page contents. Hence an online bookshop will be able to customise responses to meet the varied needs of users. This may involve presenting the same information about the bookshop to each user in specific formats to suit them, or even providing additional customised information when deemed appropriate.

Therefore, users will be able to obtain information about the books that are of interest to them, and may even have the Web pages generated in colours/formats that meet their personal preferences. Second-generation systems will increase the amount of multimedia used in e-commerce systems, with text and images tailored to suit each user. Consequently, these systems will be powerful, as Web-based marketing will be carried out in the context of user preferences listed in their profiles. However, the basic concepts present in these systems may be extended further to build more personalised and robust e-commerce solutions.

Third generation e-commerce

Future e-commerce models are an enhancement of the second generation models, together with the use of interactive and optionally intelligent mobile agents (Figure 3). Once again the technical aspects and details of mobile agents have been deliberately omitted as they are beyond the scope of this article.

These third-generation systems are expected to surpass the capabilities of evolving second-generation technologies, by providing a multitude of opportunities. One of the major benefits of these systems is the ability to "push" customised messages and programs onto users in an intelligent manner. In addition, these systems are likely to have an increased use of multimedia applications, due to the more browser-centric nature of this model.

Such technology will permit browsers to receive code (programs or mobile agents) when the user is not aware of it, and therefore permit agent mobility. It would also provide the ability to migrate the code after it has been received and utilised, so that it may continue upon its life mission.

Effectively, mobile agents will be able to present themselves to users when they are Web browsing, and not logged onto a particular Web site. A mobile agent may be considered to be analogous to the Microsoft Word "paperclip man", in terms of physical characteristics. It may be sometimes annoying to the user, but can prove useful as well. These assistants may form the foundation for a new way to perform e-commerce sales and transactions.

Looking at the previous example of an online bookshop, many more features and services are available by implementing a third-generation system. In addition to the customised Web pages available in second-generation systems, mobile agents (paperclip men) will be able to inform users (without the user having to log onto the book shop's Web site) that a particular title of interest to the user has arrived, or has been discounted.

Such levels of personalised service and follow-up on sales are only a small fraction of the myriad of possibilities that exist with third-generation systems. However, in order to implement these third-generation systems, evolving browser-server technologies are required (see Mobile Agent article in June *PC Update*). With the likely existence of these technologies,

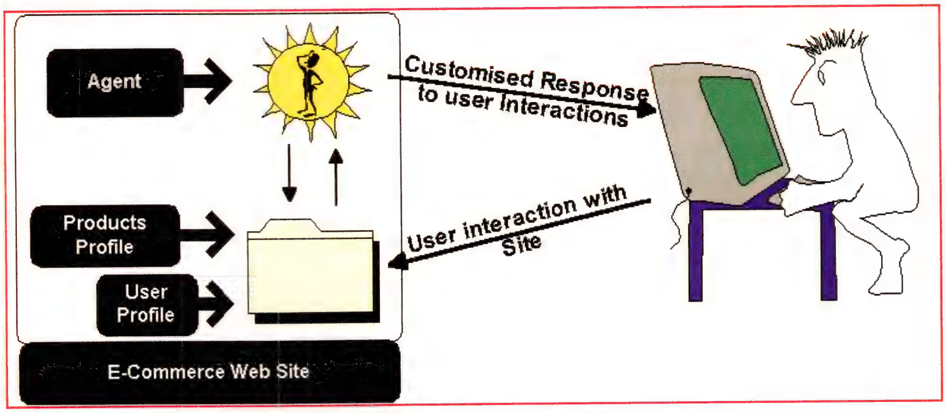

Agent
Products Profile
User Profile
E-Commerce Web Site
Customised Response to user Interactions
User interaction with Site

Figure 2 Second-generation e-commerce system

interactive (and intelligent) mobile agents will be able to present users with timely information, forming the basis for a successful marketing strategy.

The arrival of an agent is more likely to capture the attention of a user than a customised e-mail that may get lost among others in an inbox. Hence, users are more inclined to respond to messages delivered through interactive agent pop-up dialogues. Furthermore, such actions are likely to result in the closure of more online sales.

Since the agent has the capacity to act on the user's behalf, an agreement to purchase will simplify the overall transaction procedure, allowing the user to resume their interrupted work after a mouse click. This has also the potential for impulse buying as a user is more likely to agree to an interrupting dialogue box that is brought to the foreground than to any other form of advertising. Such impulse buying as a result of mobile agents is analogous to impulse buying when watching infomercials.

In addition, these systems are expected to be data-mining enabled, so that local user profiles and those of other companies may be examined. The mining of user profiles may be performed across various applications, as well as Web sites.

This predicted sharing of information between competing or collaborating organisations is known as "co-opetition". With the inclusion of the above additional features, third-generation systems will aid in taking the notion of electronic commerce a step further, allowing its potential to be fully exploited. The synergy created through the mixture of complementing technologies will revolutionise the user and vendor relationships beyond any previously imaginable boundaries.

Further Issues

The foremost challenges faced in implementing third-generation systems are technology related. As mentioned above, browser-server technologies are required before intelligent and interactive mobile agents may be used for e-commerce applications. However, this challenge may be overcome through continual research in the field. In addition to software requirements, other technological issues such as security, also need to be addressed.

It will be vital that the utilisation of mobile agents does not compromise system integrity and user privacy. Furthermore, there is additional scope for malicious intent expressed through agents. For instance, mobile agents developed with a rogue life mission may also be viewed as nomadic viruses.

Virus agents, junk agents and dishonest impersonator agents are potential problems that also need to be addressed. A technology with the power to abuse albeit similar to the Melissa Virus. Also, as mentioned briefly above, third-generation e-commerce systems will enable businesses to data mine rich sets of user information. Therefore, prior to any commercial implementations of these systems, it is crucial that some regulations are in place to protect users from potential privacy violations. Without any guarantees against potential abuse, it is unlikely that users will willingly embrace third-generation systems, and without this support the acceptance of future e-commerce systems may not eventuate.

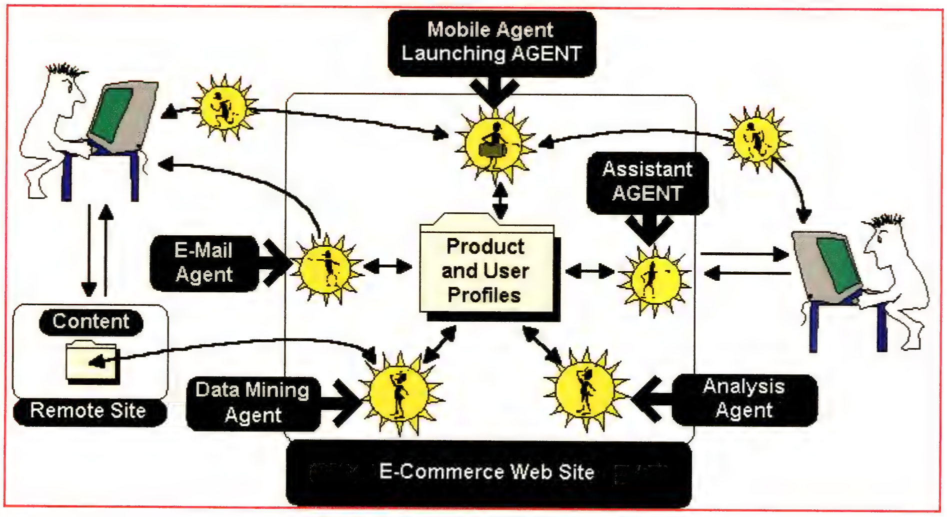


Figure 3 Third-generation e-commerce system

Conclusions

The introduction of e-commerce has revolutionised the way in which business transactions are carried out. The many benefits and cost reductions brought about by Web-based systems have left less technologically inclined businesses with little choice but to form a presence on the Web. Moreover the opportunities presented by online systems have also impacted upon most areas of business, and are continuing this trend at a phenomenal rate.

This outburst of e-commerce applications has brought about new levels of sophistication to Web-based marketing strategies. Along this path, automation and overhead cost reductions have become evident. This trend has proven beneficial for everyone, ranging from suppliers to end-user consumers, translating to overall reduction in costs, decreasing of lead times, and increasing the speed to market of new products. However, as mentioned in this article, the current applications of e-commerce do not fully exploit the potential capabilities of such systems. More interactive and customised systems are likely to be found in abundance with the onset of second-generation, and in particular, third-generation e-commerce solutions.

These continual improvements will undoubtedly revolutionise Web-based marketing strategies for all e-companies that decide to employ these systems. Finally, various problems and challenges need to be overcome before third-generation systems will become a reality. These consist of numerous technological challenges, as well as issues related to privacy, which ultimately leads to the user acceptance of this technology. Acceptance is paramount as a technologically powerful system without a client base is likely to prove of limited demand. However, once these initial hurdles are overcome, there is little doubt that future e-commerce systems will be advantageous to both users and businesses.

About the author

Deshani Rodrigo is currently combining her commerce and engineering background with her computing skills to complete a Masters Degree. She is investigating performance of various e-commerce systems and other Internet-related applications. She can be reached at *deshani.rodrigo@csse.monash.edu.au* ☐

Steve
Morgan

The Internet, present and future

The estimated number of USA Internet subscribers recently hit 83 million people, up 20 million in six months. The introducon of good, inexpensive computers ith modems will make 1998 and 1999 e years that people will look back on s the start of the "connected" lifestyle.

ooking back over the last five years, it is ind-boggling how much has changed. aster modem speeds, improving browser oftware, and an explosion of content as made the Internet the biggest event f the 90s. What is going on now, and hat will happen in the future? And hat will be the effect on how we ommunicate and conduct our lives? his article tries to cover the present nd point out how today's trends could nfluence life in the year 2005.

resent trends

Online Communities—The Internet is becoming the favourite meeting place of the world. Students, parents and business people log on for hours a day, talking to others in chat rooms. "Buddy software" lets you know when the people you want to communicate with are online and enables you to converse with them anytime. Before, you were limited to talking to one person at a time on the telephone. Now you can converse with dozens of people at a time

- **Online games**—There are dozens of online areas to play games against others, the amazing thing is that several of them average over 100,000 users at once! Whatever kind of game you play, you can now join with others on the Web and play anytime! No worry about getting a partner, there are always thousands of other people to play. No worry about wanting to leave early or late, there is always someone willing to take your place
- **Online shopping**—Anything you can buy at a store, can now be bought online. Books, cars, computers, clothes, appliances, music, antiques, jewellery, pharmaceuticals, travel... the list is endless. Since the merchants offering the products do not have brick and mortar stores to maintain, often the prices are less expensive than at traditional retail stores. There are even merchants that offer prices that are below cost just to have you come to their sites and see the advertising
- **Online news**—Almost every newspaper in America is also published on the Web. It is now easy to keep up on news from your hometown, even if it is located 2000 miles away. Not only can you take your pick of any or all of the major newspapers, you can arrange to downloaded them to your computer during the night, so that you can read them that morning
- **Online Radio**—Listening to the radio on the Internet is so popular that Microsoft's newest web browser comes with a listing of all radio stations that offer Internet broadcasting. It even has a "radio tuner" that you can dial and get different broadcasts just like on your radio at home. At the present time, quality is good with voice radio; a fast modem is needed to hear true stereo music.

Here are some five-year predictions:

- The number of USA Internet users will climb to 80% of the population, or roughly 240 million individuals
- Pocket-sized computers with wireless Internet access will be available to everyone. Shortly IBM will introduce its new MicroDrive that fits 340 MB on a hard drive the size of a biscuit. In 2001 Optical Drives will store 20 GB in an area slightly larger than a postage stamp. Speech recognition software will become 99% accurate and will be the primary way to interface with all your computers. Combine all this with cheap access to nationwide digital cellular service and the ingredients for a truly connected society come together
- The Internet will be everywhere, a central part of every day. 95% of the population between 8 and 70 will have personal Internet access. Schools will become wired for the Internet and wonder how they taught without it. Homes will have computer access in several places, allowing the whole family to be connected
- 40% of all purchasing will be done on the Internet. During the next five years look for a large number of businesses to close because of inability to compete with Web merchants. The big winnners will be anyone that delivers items bought on the Internet
- Call me a dreamer, but I believe with the Internet available to all, more and more issues will be debated and resolved on the Internet. The near instantaneous nature of Internet communication means that policies can be proposed, debated and voted on within weeks. Imagine what the effect would be if new laws were proposed on the web, emailed to each person, debated on bulletin boards and then each person made a decision and sent it to their elected official! I believe that this will be especially useful for local communities to find out what residents want.

I believe, while not all change is good, without change things will never get better. We are looking at changes in the next five years that will totally transform the way everyone will work, play and manage their lives. Our challenge is to make sure that we seize this opportunity to make our lives better.

About the author

This article is furnished as a benefit of Melb PC's membership of the international Association of Personal Computer User Groups (APCUG). Stephen Morgan has been watching and participating in the advance of computers since 1976 when he got hooked by one of the first Multi User Dungeons (MUD) available through the Minnesota Educational Internet System. He is currently Program Chair for the Plateau PC Users Group in Crossville, TN and the Northwest USA adviser for APCUG. ☐

Letter to the Editor

[Ed: Peter Downie sent an interesting letter that will be of interest to many members. —AN]

I discovered that I did not know how to get on to the Bulletin Board. I tried setting up a link in Dial-up Networking and dialled 9699 6611 and tried using my member number as a password but nothing seemed to happen. I have also re-read your article in *PC Update* Nov 98 about plain text files and assume that if I create the text in Outlook Express it will be so — but I don't know.

George Skarbek replies...

With the popularity of the Internet, many users are not familiar with the BBS (Bulletin Board System) and therefore *PC Update* now accepts submissions over the Internet as an alternative to using the BBS. The e-mail address is *pcupdate@melbpc.org.au*.

However for those who do wish to connect to the Melb PC User Group BBS you can't use the Dial Up Networking as this method won't work, because the protocols used in the communication are different.

Connecting to the BBS is done by using the HyperTerminal program or a similar type of program, such as the DOS version of Telix. (HyperTerminal is found under Accessories, Communications in Windows 98). If HyperTerminal is not there then from Control Panel, select Add/Remove Programs, Communications and tick HyperTerminal to add it. You will be asked for the Windows CD-ROM and then HyperTerminal will be available.

Peter continues...

I am a self-employed consultant who works from home, mostly in engineering contract associated work. I travel a lot. I have a Desktop PC and a Notebook PC, and I carry a lot of of my files and resources as documents in the Notebook.

I want to keep using two computers for security reasons and also because other people can access my Desktop if need be while I am away. I need to synchronise my files in both computers, so the latest version of documents and e-mail address books, etc are in both. Either could contain the latest version before synchronising. I tried using My Briefcase but it doesn't seem to cope too well with 1 GB of files. I have asked software vendors without success. Is there a solution? I have network cards in both and do it manually at present but it takes ages and is driving me insane.

George Skarbek replies...

Synchronising folders is possible by using the Briefcase facility in Windows 95/98 but with 1 GB of files, as the reader has, there may be problems. I have only been working with much smaller groups of files, less than 1,000 files and under 50 MB. Briefcase also may cause problems if you delete files from one computer and wish to retain them on the other.

Rather than using the Briefcase facility, I use a batch (BAT) file that contains all the folders that are important to me and I copy only the modified files to the other computer. There is an icon pointing to this BAT file on my desktop and I just click on it to perform my backup each day. Although I have lots of files, this backup over the LAN takes less than one minute as only the modified files are copied.

I need to synchronise files in two computers, so the latest versions are in both

Listing 1 is a sample BAT file, called daily.bat.

Drive X: is the remote computer. The /D switch instructs xcopy to copy only the newer files and the /S instructs xcopy to include all subdirectories. The first four xcopy instructions are preceded by the cd (Change Directory) command to ensure that the programs and data are kept in the same directory

```
X:
cd\eudora
xcopy c:\eudora\*.* /D /S
cd\OzEmail
xcopy c:\OzEmail\*.* /D /S
cd\docs
xcopy c:\docs\*.* /D /S
cd\Invoices
xcopy c:\Invoices /D


cd\backup
xcopy C:\PROGRA~1\COMMON~1\SYSTEM\MAPI\1033\95\*.pst /D
xcopy "C:\Program Files\Microsoft Office\Templates\normal.dot" /D


pkzip -u -x*.tmp PCUpdate c:\PCUpdate\*.*
pkzip -u -x*.tmp MelbISP c:\MelbISP\*.*
```

Listing 1

ructure as the original. This will help ith rapid restoration in case of hard isk problems.

he next two xcopy commands copy nly a single file into my backup older. These files contain all the Outlook data (the *.pst) file and my Word template (normal.dot) that ontains my customising of Word.

n cases where the data is stored rimarily for backup, I use PKZip to ompress the files. The –u switch nstructs PKzip to update the zip file nd –x*.tmp instructs PKZip to ignore ny tmp files. The word appearing ext, say “MelbISP”, is the name I want the zip file to be called. Note that recent version of PKZip should be sed. The original version, 2.04g from 993 will work but it will convert the ong file names to eight characters.

The BAT files can be created with any ext editor, such as Notepad.

Warning: Although the system that I have described works well in my case, t is primarily designed for backup purposes. There is a danger if you modify the same file on both computers n the same day. Then, depending on which way you are synchronising, the ile will either not be backed up, or it will be overwritten by the newer one and some data may be lost. There is no easy answer in such an event and Briefcase will not be able to automatically resolve this problem either.

Ash Nallawalla adds...

Although Word is my preferred word processor, we discourage submissions in that format for several reasons. The next editor or subeditor to join our team may not use it. Sometimes, an author may embed an image in a Word file, making it impossible for the editors to extract and save the image to an image file, in a form suitable for publishing. To create a text file (also called an ASCII file) from Word, simply use the Save As option in the File menu. □

George Skarbek

Backing up Internet Dialler settings

When a user upgrades a computer or has a disk crash, the Internet dialler settings must be re-installed. Often there may be two or more ISPs, each with several numbers that have to be re-entered and not only the phone numbers but also the server settings that involve setting the TCP/IC numbers for the DNS etc. I have been often asked is there any way that I can back up all my Internet settings?

Until recently I was not able to recommend an easy way but I have found one that is possible which involves using Regedit. However, there is no editing required, just exporting some data. As Regedit does not perform any checking, and updates are immediate (there is no option to save or not), **be very careful and don't click first and think later.**

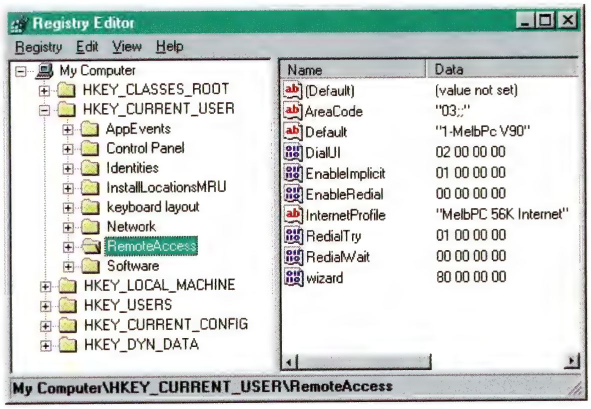
To export a part of your Registry settings go to Start, Run and type regedit in the dialog box. Then click on the plus sign immediately to the left of HKEY_CURRENT_USER and then click on the RemoteAccess Folder icon. This will show data in the right-hand side but do not click there. With RemoteAccess highlighted, click on Registry, (top right-hand side) and then Export Registry File (see Figure 1). When the Export Registry File dialog box appears, type an appropriate name such as MyISP. Make sure that in the Export Range the Selected Branch is picked. Now click Save to save the file and close the dialog box. If you type A: before the name, the backup file will be saved in the floppy. Finally click on Registry and Exit to close the program.

Then if you ever have to set up your dial-up networking again, on this or on a new computer, then just run Regedit, click on Registry and Import Registry File and point to your file, MyISP.reg and all your settings will be merged. Even on a new computer, all your settings, the phone numbers, TCP/IP settings and all the Dial-Up network icons will immediately appear on your new computer. Note that your passwords are not exported, as they are not a part of the Registry.

I recommend that all Internet users create this small file, especially before upgrading a computer, or in case of problems, as this will save you a lot of time.

Note that if your new computer has a new modem, then you will need to right-click on the Dial-Up Networking icon and from Properties, Connect Using select your new modem.

Although the registry export and import will restore most settings, you may still have to make a small change to the new browser if your ISP requires a Proxy server to be set and the proxy setting is not restored. Your mail reader settings are also not restored. You will have to enter your user name (which will be restored in the dialler) and the incoming and outgoing mail servers. These should be written down, as your ISP will have supplied them to you when you joined. □



- My Computer
  - HKEY_CLASSES_ROOT
  - HKEY_CURRENT_USER
    - AppEvents
    - Control Panel
    - Identities
    - InstallLocationsMRU
    - keyboard layout
    - Network
    - RemoteAccess
    - Software
  - HKEY_LOCAL_MACHINE
  - HKEY_USERS
  - HKEY_CURRENT_CONFIG
  - HKEY_DYN_DATA

Name	Data
(Default)	(value not set)
AreaCode	"03;;"
Default	"1-MelbPc V90"
DialUI	02 00 00 00
EnableImplicit	01 00 00 00
EnableRedial	00 00 00 00
InternetProfile	"MelbPC 56K Internet"
RedialTry	01 00 00 00
RedialWait	00 00 00 00
wizard	80 00 00 00

My Computer\HKEY_CURRENT_USER\RemoteAccess

Figure 1

Ken Holmes

The hypercube: Exploring the fourth dimension, and further

```
'HYPRCUBE.BAS
       'Rotates hypercube about real and imaginary axes
DECLARE SUB rot (a, b) 'serves 6 possible pairs of axes
DECLARE SUB plot () 'plots on active screen (in memory)
DIM SHARED corn(15, 3)            '16 hypercube vertices
DIM SHARED trail(32) AS INTEGER  'line drawing sequence
DIM SHARED col(32) AS INTEGER    'line colours sequence
DIM rotate AS INTEGER  'rotation mode(uses ASCII value)
DIM SHARED sn, cs AS SINGLE  'sin & cos(rotation angle)
FOR n = 0 TO 15: FOR m = 0 TO 3      'read Hypercube...
 READ corn(n, m): NEXT: NEXT         '...coords, (u,x,y,z)
FOR n = 0 TO 32: READ trail(n): NEXT     'line sequence
FOR n = 0 TO 32: READ col(n): NEXT     'colour sequence
start:     'rotation on x(ASCII=120) axis, 0.01 radians
ky = 120: ang = .01: sn = SIN(ang): cs = COS(ang)
SCREEN 9: WINDOW (-4.8, -2.4)-(1.6, 2.4) 'EGA screen...
DO 'looping         '...which has two pages for animation
key$ = INKEY$                          'check for key press
IF key$ <> “” THEN ky = ASC(key$) 'read key ASCII value
SELECT CASE ky       'action is based on key ASCII value
 CASE 120 TO 122: rotate = ky 'rot. about x,y or z axis
 CASE 49 TO 51: rotate = ky'1,2 or 3 - rot x/y/z with u
 CASE 102: ang = ang + .002                '"f" makes faster
  sn = SIN(ang): cs = COS(ang): ky = 0
 CASE 115: ang = ang - .002                '"s" makes slower
  sn = SIN(ang): cs = COS(ang): ky = 0       'nullify ky
 CASE 32: rotate = 0               'spacebar stops rotation
 CASE 101: FOR n = 0 TO 7: FOR m = 1 TO 3
  corn(n, m) = corn(n, m) * 1.1: NEXT: NEXT'e expands..
  ky = 0   '...cube at u = -1 (once, then ky nullified)
 CASE 114: FOR n = 0 TO 7: FOR v = 1 TO 3
  corn(n, m) = corn(n, m) * .9: NEXT: NEXT 'r reduces..
  ky = 0   '...cube at u = -1 (once, then ky nullified)
 CASE 99: c = 1 - c: ky = 0 'c toggles 0/1 (CLS on/off)
END SELECT
SELECT CASE rotate                   'current rotation mode
 CASE 120: CALL rot(2, 3)                     'y and z axes
 CASE 121: CALL rot(3, 1)                     'z and x axes
 CASE 122: CALL rot(1, 2)                     'x and y axes
 CASE 49: CALL rot(1, 0)                      'x and u axes
 CASE 50: CALL rot(2, 0)                      'y and u axes
 CASE 51: CALL rot(3, 0)                      'z and u axes
END SELECT
IF c = 0 THEN CLS           'if c = 1, screen not cleared
plot   'plots on active page in memory to be swapped...
p = 1 - p: SCREEN , , p, 1 - p        '...with visual page
FOR n = 1 TO 500: NEXT  'counted delay for viewing time
LOOP UNTIL ky = 27                   'until Escape key hit
END            'Now for coordinates (u, x, y, z) of ...
'points 0-15. Points 0-7 are at u=-1 & 8-15 are at u=+1
DATA -1,-1,-1,-1, -1,-1,-1, 1, -1,-1, 1,-1, -1,-1, 1, 1
DATA -1, 1,-1,-1, -1, 1,-1, 1, -1, 1, 1,-1, -1, 1, 1, 1
DATA  1,-1,-1,-1,  1,-1,-1, 1,  1,-1, 1,-1,  1,-1, 1, 1
```

Listing 1 (continued on facing page)

With apologies to those who know all about the hypercub this is written for those who don't, to indicate the interesting shapes you can get in 3D by extending 3D mathematics into an imaginar fourth dimension. I first learnt of this from Prof. A K Dewdney's "Computer Recreations" column in the April 1986 issue of *Scientific American*.

Let us imagine that another Big Bang created a 2D universe and we are 2D critters living in a plane world. We come to appreciate our position in relation to x and y axes at right angles, can perceive points, lines, squares and circles and can do Pythagoras. Our 2D mathematicians (2DMs) can rotate a point about the origin with two equations looking like "SUB rot" in the QBasic code in Listing 1. As it rotates, the new x and y co-ordinates each depend on the old x and y, and the angle of rotation. We might consider that the simplest square has its corners at the four points (x,y) = (±1, ±1).

Then these pesky 2DMs tell us there is a third imaginary axis, z, which is at right angles to each axis, x and y. Unbelievable! Moreover, they have the hide to suggest they can put similar squares at z = −1 and +1, which will define a "cube" with eight corners at (x, y, z) = (±1, ±1, ±1). What's more, they say, they will apply their rotation equations to the x and z or to the y and z pairs or, the devils, to both pairs. When they plot the eight points with the new x and y co-ordinates and join them up we see a surprising figure. There is no indication of z co-ordinates and, even if there were, we are quite incapable of visualising the 3D cube. Of course, we know there isn't really a z axis, but we've surely seen some interesting shapes in our 2D world. Let's face it, life is pretty dreary here in 2D and we welcome anything new.

Happily, we do live in 3D, or at least we think we do, and know that the "surprising figure" seen by our 2D friends was an orthogonal projection of the cube onto their plane. We rotate things with gay abandon about any axis; when we keep x constant and relate y and z by the equations, we call it "rotation about the x axis", but, for our present purposes we are going call this “rotation of the y and z axes”, which how the point sees it. Of course, we observers e sort of attached to the axes and see it as a tation of the point. Now, we have our own t of pesky 3DMs who tell us there is a fourth nreal” axis, which we'll call u, and, get this, ey insist that it is at right angles to each of x, and z. You don't get it, do you? And neither I, because we just can't visualise 4D, but let's along with it. Moreover they have the hide suggest putting cubes at u = –1 and +1, which ill define a “hypercube” with eight corners at , x, y, z) = (±1, ±1, ±1, ±1). What's more, ey are prepared to rotate any of the six ossible pairs of the four axes. Again, we can nly plot something using the real co-ordinates nd, working on 2D paper or screens, we can nly present 2D information. We are used to epicting 3D on a flat surface and are able to ecognise familiar 3D objects, but if we really ant to see 3D, particularly with unfamiliar bjects, we need some stereo device giving each ye a different view. The most readily available nd cheapest is the mirror. Listing 1 will give ou a stereo view of the hypercube where you an at least see its orthogonal projection onto D space, rotating in any of the six modes.

t the start, we will see a single cube since both ubes have the same x/y/z and the difference in is not visible to us. If we rotate any pair of eal axes, we will see a rotating cube with, say, x nd y swapping information so that each o-ordinate varies sinusoidally. They are 90 egrees out of phase and we might say that the econd one is varying cosinusoidally. We can see oth cubes if we change the size of one and ressing “r” four or five times in our program vill halve the size of the cube at u = –1. This hould probably be called a “hypertrapezoid”, as llustrated by Figure 1. Things get really (or nreally?) interesting when we rotate u with ne of x/y/z; if, say, x is swapping information vith u, we will see the effect on x but not on he invisible u. The two cubes have different u alues, so the variation of their x values will be uite different; they will move relative to each ther and change shape in weird ways. At first ight, you may get the impression it is rotating bout the y axis because of the sinusoidal motion long the x axis but, if you look carefully, their s no motion along the z axis. You would not e able to assess this in 2D, non-stereo. This rogram rotates the axes continuously and, if you return to a rotation of real axes the figure will rotate without changing shape — until you select an unreal rotation again. Figure 2 is the sort of configuration after several real and unreal rotations.

Note: Prof Dewdney's article sticks with the hypercube but does a perspective projection from the point (3, 0, 0, 0), in the fourth dimension, onto the 3D hypersurface at u = 1. Since the cube at u = –1 is twice as far away as the one at u = 1, it appears half sized and his starting figure is identical to Figure 1, but unreal rotations produce much greater, and more interesting, distortions due to the perspective from close up in the fourth dimension. Alternative code in “SUB plot” allows you to see this.

The program

The EGA screen mode has two “pages” which can be “visual” (on screen) and/or “active” (any code will write to it). Normally, page 0 is both, and page 1 is unused, but if we make page 1 active we can draw on it off screen, in memory. If we then swap pages we can see page 1 while drawing the next picture off screen on page 0. Thus we easily achieve animation. The WINDOW is sized so that the ±1 sized figure has room to rotate on the right half of the screen and the left half can accept the flipped left eye view. The corners 0 to 15 have their u/x/y/z (or 0/1/2/3) co-ordinates stored in the two dimensional array corn(15,3), and trail(32) is a sequence, supplied in *Scientific American*, for drawing the 32 lines in a string passing through each of the 16 points twice. I have contrived a colour sequence in col(32) so that, for example, all lines originally parallel to the x axis are green. These arrays are filled by reading the DATA at the end of the code.

For convenience, we use the ASCII value for the keys x/y/z/1/2/3 in the variable “rotate” to choose which mode of rotation occurs. Whilst x gives rotation about the x axis, 1 gives an oscillation along it. Keys r and e cause a reduction or an expansion of the cube at u = –1 and keys f and s will make the rotation faster or slower by changing the angle change between plots. For a bit of fun, c will toggle screen clearance off/on to give nice changing patterns of colour on the screen. The display is simply wireline and the fixed trail of line drawing means that, half the time, a more distant line is drawn over a closer one so that the figure is ambiguous, particularly with different colours. Rectifying this needs some tedious code to draw furthest lines first. For this article, the program was extended to write a file for the POVRay ray tracing program with rods replacing each line. This produced the figures with no mistakes since each ray

```
DATA  1, 1,-1,-1,  1, 1,-1, 1,  1, 1, 1,-1,  1, 1, 1, 1
   'Drawing trail goes through points twice, in order -
DATA 0,1,3,2,6,14,10,8,9,11,3,7,15,14,12,13,9
DATA 1,5,7,6,4,12,8,0,4,5,13,15,11,10,2,0
                'lines are coloured in following order -
DATA 0,4,3,4,2,1,2,3,4,3,1,2,1,4,3,4,2
DATA 1,2,3,4,3,1,2,1,2,4,1,3,2,4,1,3

SUB plot   'rt & lft eye plots on active page in memory
FOR n = 0 TO 32: s = trail(n)     'use 'trail' sequence
      'for orthogonal projection, use next line OR ....
 x = corn(s, 1): y = corn(s, 2): z = corn(s, 3)
    '....for perspective projection, use next two lines
 'f = 2 / (3 - corn(s, 0))
 'x = f* corn(s,1): y = f* corn(s,2): z = f* corn(s,3)
 fz = z / (z + 10): xr = x - (x + .8) * fz
 xl = -3.2 - x - (x + 2.4) * fz: yb = y - y * fz
 IF n > 0 THEN       'can't draw line with only point 0
  LINE (xs, yc)-(xr, yb), col(n)                'right eye
  LINE (xm, yc)-(xl, yb), col(n)                 'left eye
 END IF
 xs = xr: xm = xl: yc = yb  'start points for next line
NEXT
END SUB

SUB rot (a, b) 'affects coords a/b(any pair of u,x,y,z)
FOR m = 0 TO 15                       'rotate 16 vertices
 temp = corn(m, a) * cs + corn(m, b) * sn   '=new (m,a)
 corn(m, b) = corn(m, b) * cs - corn(m, a) * sn
 corn(m, a) = temp: NEXT  'need original (m,a) in eqn.2
END SUB
```

Listing 1 (continued from previous page)

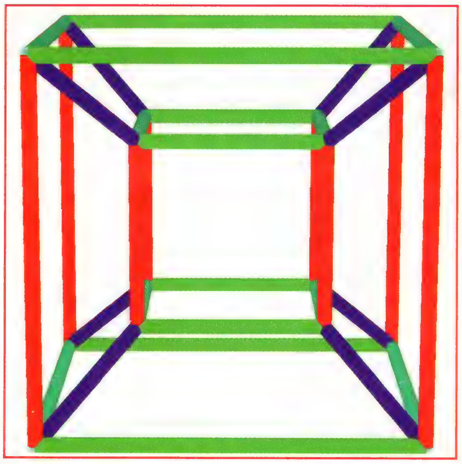


Figure 1 Hypercube with one cube smaller (Hypertrapezoid?)

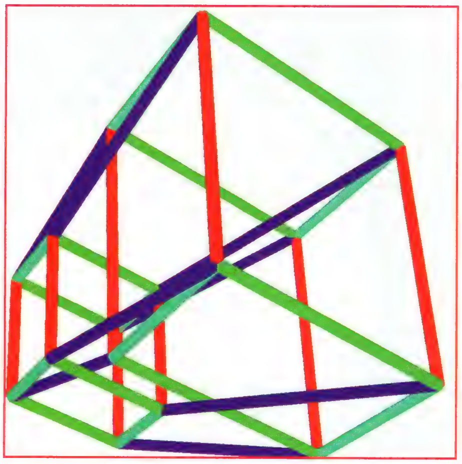


Figure 2 Hypertrapezoid after several real and unreal rotations

from eye to screen only records the first object and ignores any beyond it. Also we could have a more substantial object. Figures 1 and 2 are not stereo, to save magazine space as we have something better to come.

How about 5D, and more?

There is no reason why we shouldn't go on to the fifth dimension, which we'll call v (very unreal), simply because it is not there, just like Neverest. We can put hypercubes at v = −1 and +1 and join them up, giving 32 points, at (u, v, x, y, z) = (±1, ±1, ±1, ±1, ±1), needing 80 connecting lines; Let's call it the Ultracube. We'll use keys 4/5/6 for rotations of the v axis with one of x/y/z. The screen is a bit crowded but it works and, with screenclear off, the colour patterns are even more intricate. The ray tracer was used to produce views for each eye, which were spliced to give the Figure 3 stereo. Whilst you wouldn't wish to build this structure, except for a bet, there is a pleasing logicality about it, with all rods of the same colour remaining parallel and of equal length. Converting it to an ultra-trapezoid would soon change that! Perhaps it would make a sculpture, or a climbing frame for a playground, provided an unreal rotation were not performed with a child aboard.

We could continue to 6D adding axis w (double unreal) by putting an ultracube at w = −1 and +1, needing 64 points, at (u, v, w, x, y, z) = (±1, ±1, ±1, ± ±1, ±1) and 192 lines, but I'll spare you that and refrain from giving it a name. The separation of figures with the first rotation involving each unreal axis is reminiscent of the mitosis (dividing) of living cells (if we didn't draw the lines connecting corresponding points on each cube).

HYPRCUBE.LZH will be on our BBS, containing the .BAS and .EXE files for both the 4D and the 5D programs. Unless we get too many complaints about the suitability of this sort of thing for a family magazine, or we lose too many members into hyperspace, I may submit a further (shorter) article on the Hypersphere which produces quite different projections onto 3D space.

Erratum

There is an error in line 6 of Listing 1 on page 58 of *PC Update* for June 99. It should read:

```
r = 140 * (RND + .4) ^ 2.5
```

The author takes full responsibility as, in re-arranging the line after inclusion in the draft article, he replaced a "+" with a "*". Many apologies.

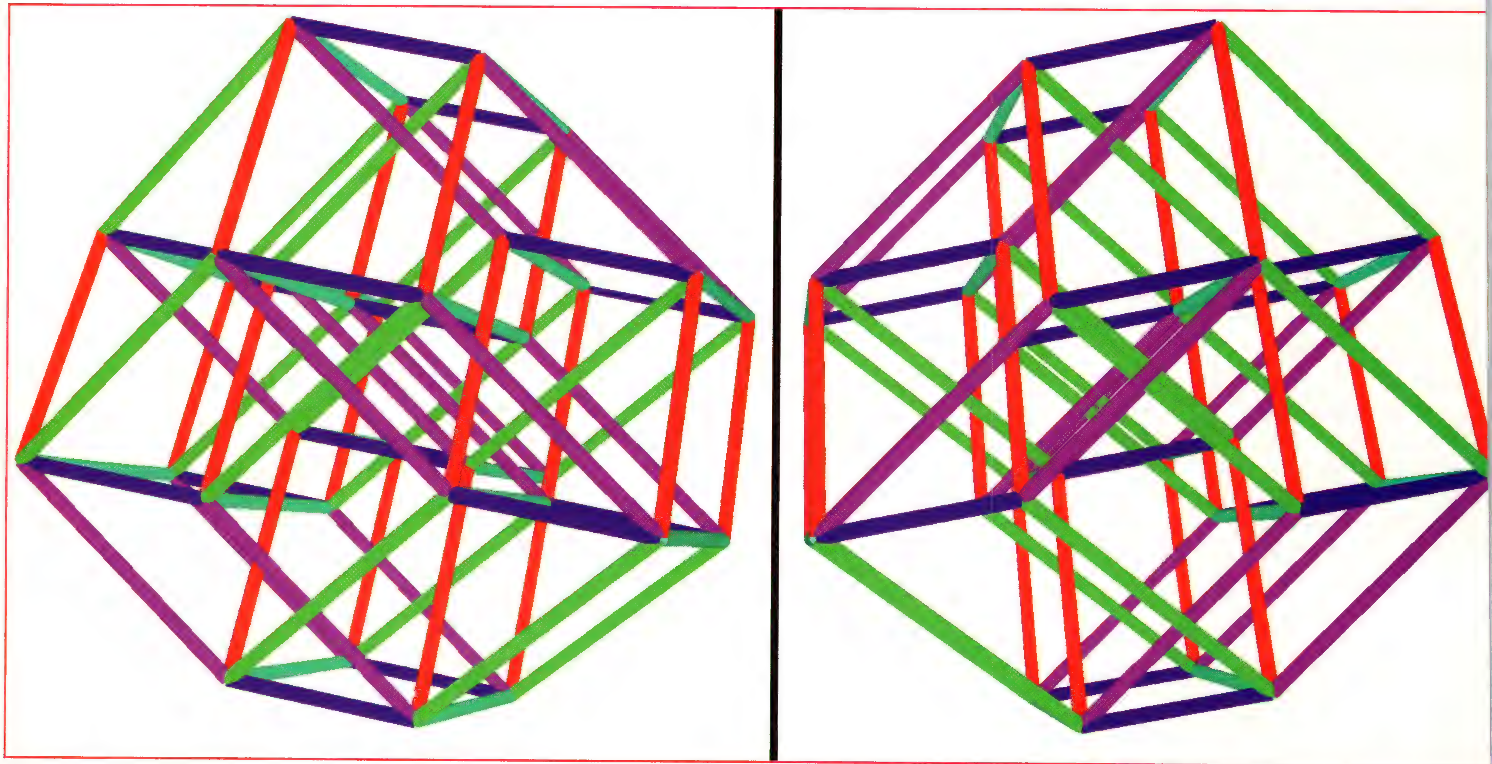


Figure 3 The 5D Ultracube. Place mirror edge up centreline, mirror facing left. Right eye looks at right screen, left eye at reflection in mirror

Random access

John Swale

uestions and answers

Q I have the sound icon on the task bar with Windows 95 but I cannot maximise it to adjust the volume. I also have installed a video capture card with its own drivers. I have re-installed the sound recorder but to no avail. The sound card works with other programs.

A Re-install Windows or uninstall the video drivers and re-install the sound recorder.

Q I was given a Pentium 120 minus a hard drive. I put in a Seagate 4.3 GB but it makes "clunking" noises. I tried to boot from a floppy to install software. The first diskette is accepted and it asks for the second but it will not recognise the keyboard. There are no keyboard lights and no input will be accepted.

A The hard drive connection may be reversed or not jumpered correctly causing the noise. There should be no connection between the keyboard problem and the hard disk noises.

Q When using the V90 internet line I find that I get charged for the engaged signals.

A There was a small software change recently and this may have caused a problem. It will be checked.

Q I have a new hard drive that has 95 V written on it. When it starts up I get a 6 inch Internet Explorer window in the middle of the desktop with a big red dot on it. How do I get rid of it?

A Right click on the task bar, select properties, start menu programs, advanced, start memu, program, startup and see if there is a shortcut to IE.

Over to You

Please contact me if you have any comments on the answers given; can provide a reply for the unanswered questions; or if you cannot attend the monthly meeting and would like a question asked and included in this column.

To contact me: write to me care of the office; leave a message on the BBS or telephone me on (03) 9857 5567 AH
or e-mail me at *jswale@melbpc.org.au*

Note: Please contact commercial distributors before asking a question here. In all cases mention version numbers.

Unanswered question

Q Is anyone using PowerJ, a Java development tool?

MELB PC USER GROUP

Do you know your local dealers?

Why not visit your local computer dealer shops to help Melb PC and yourself?

We need you to help increase membership – our strength is our membership, and our members enjoy the benefits that our strength brings.

What does it require?

- Visit your local dealers
- Leave some of our membership forms (nothing could be simpler)!

The office will send you bundles of application forms and some notes for guidance in obtaining the interest and co-operation of the dealers in your area.

That's all you have to do! As new members join using the application form you have distributed, you will be credited with additional months of free membership.

The dealer's stamp on the membership form will ensure his commission is paid directly to him from Melb PC.

No experience necessary – anyone can do it!

What's in it for you?

- Free extension of your membership (nothing could be nicer)!

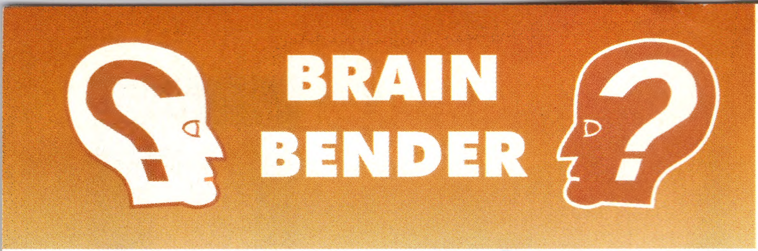
What's in it for the dealer?

- $10 commission on each new member
- Melb PC will help reduce his support requirements (and they all would like that).

How do you start?

- Ring the office on 9699 6222
- Nominate your preferred area and the number of dealers you will cover.

Melb PC: Users helping users



Peter's *PC Update* puzzles

Peter Smith

These puzzles can be solved without using a computer—if one bird-brain can write them, another can solve them!

Wandering words

This puzzle contains the opening sentence of a book published in 1995, and written by a well-known American author. All the characters of the quote appear in the clues in the bottom lines, each character belongs in the column under which it appears. What little punctuation there is, is present.

Hint

There are 18 words altogether, four of which are longer than six letters.

Cryptotext

This cryptotext contains both a quote and its author. The original text was converted using a simple substitution code, that is each occurrence of a particular letter has been replaced with another letter. No letter is replaced by itself.

Hints

The most common letters in the English language are E T A I O and N. Start with the short words.

A new partnership

What sort of software or hardware are Peter and Bill creating these days? □

MANUFACTURED BY

NORTON GATES P/L

Wandering words

																					■	■
H	Y	T	A	E	E	S	R	I	L	E	R	B	F	C	A	M	I	A	L	H	D	T
M	R	D	I	S	I	R	G	E	N	O	D	O	Y	E	O	S	H	A	R	E	W	W
E	E	W	H	C	I	E	L	O	Z	T	C	M	B	F	Y	S	E	E	N	A	A	Y
E	D	N	E	R	L	A	I	A	V	P	O	A	E	L	S	T	E	O	L	.		

Cryptotext

UBCEBBG COB WHBQ QGH COB FBQZWCM

UBCEBBG COB KDCWDG QGH COB QSC

JQZZR COB ROQHDE. C R BZWDC

June's solutions

Four of everything

	a	b	c	d	e	f	
A	1	9	6	7	2	1	26
B	3	4	1	9	5	8	30
C	2	3	6	8	7	5	31
D	7	9	4	9	2	8	39
E	2	1	8	7	5	3	26
F	4	5	3	6	4	6	28
	19	31	28	46	25	31	

Losing at Lotto

A system 15, containing 4, 8, 13, 15, 17, 20, 22, 23, 25, 27, 28, 33, 35, 39, 43

Autumn racing

Quick Breeze,
Jack, O'Flynn, Caulfield
Rustic Emperor,
Jim, Buckley, Moonee Valley
Night Rover,
Joe, Tucker, Mornington
Flaming Goer,
Jeff, Gibson, Flemington
Pure Rhythm,
John, Parkinson, Sandown

Acknowledgments

Melbourne PC User Group gratefully acknowledges the support provided by the following organisations:

American Power Conversion for the supply of six uninterruptible power supplies for the Group's Communications Centre.

ACA Pacific for the donation of a Diamond Stealth Video card used in the production of *PC Update*.

Computer Rebuilds for the supply of equipment used in the Group's Communications Centre and in the production of *PC Update*.

Hewlett-Packard for a LaserJet 4M printer for administration, and a ScanJet scanner and LaserJet 5Si MX used in the production of *PC Update*.

Michaels Camera & Video for a Kodak DC20 Digital Camera.

Microsoft Australia for many years of contributions and support.

SONY Australia for the supply of equipment used in the production of *PC Update*.

Symantec Australia for many years of contributions and support.

Monthly meeting

All members and guests welcome

Pharmacy College
381 Royal Parade
Parkville

6.00 pm
First Wednesday
each month

Next meeting: 7 July

Penelope Lewin and **Des Jacobsen**, *Microsoft*:
Office 2000

and

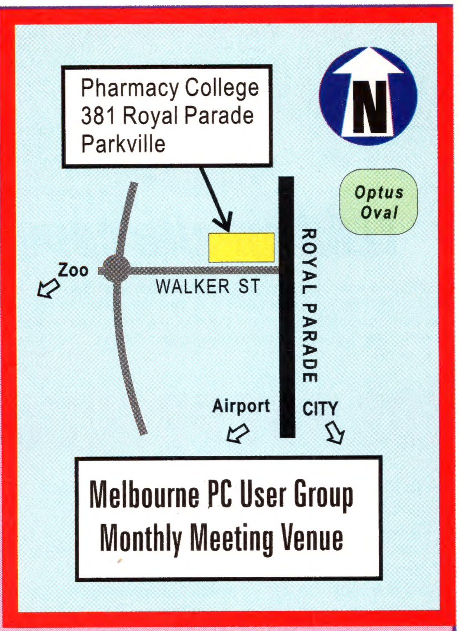
Mark Ostryn, *Dialog Corporation:*
Dialog Intranet Tool Kit

The Dialog Corporation is a leading provider of internet-based information, technology and e-commerce solutions.

This kit provides customised access to a plethora of wold-wide sources..

Plus:

- The usual giveaways and raffle
- Random access (your chance to get answers to unsolved problems)
- Club news from the President
- Shareware library sales
- Socialising



Melbourne PC User Group
Monthly Meeting Venue

Do you have a product that would interest our members?

An average of over 400 members and guests attend our monthly meetings, which provide an excellent forum to introduce and release new products to those who are both users and decision-makers.

Meetings are arranged around planned themes. Members or presenters who are able to assist or contribute are invited to contact the convener, Brian Horman, via the office, on 9699 6222 or e-mail *brianh@melbpc.org.au*

PC Update advertisers index

Advertiser	Page
auctiontrader.com.au	14
Bayside PC Services	29
Computer Rebuilds	13
Essential Economics	22
HPM Technologies	11
Intronics	19
Melb PC: Do you know your local dealer?	61
Melb PC: Skarbek's Computer Guide	5
Modem Superstore	13
nmit	19
nmit	25
OfficeNet	15
Peter McGuigan's Notebooks Galore	19
Peter Selig	27
Pollock Computer & Technical Services	13
Swap Meets	17
The Green Line	7
The Scanner Place	9
TECS	OBC
Vet	14

Membership

Do you have a problem thinking of gifts for family, friends or colleagues?

The next time you're stuck, why not give them memberships in Melb PC?

PC Update, BBS, SIGs, Training, Internet, Intranet, Dial Help, Monthly Meetings, Shareware, First Aid ... all this and growing.

Anyone who uses a PC will benefit from membership of Melb PC.

MELB PC
USER GROUP

Cougar

- **Intel Celeron 366 CPU**
- 128K cache
- Gigabyte LX chipset
- 32M SDRAM
- 4.3G ultra IDE HDD
- 1.44M FDD
- 8M ATI AGP video on-board
- 15" Magtron monitor
- 40X CD-ROM drive
- PCI 3D sound on-board
- Pair of speakers
- Logitech mouse & pad
- 104 keyboard
- Micro ATX mini-tower case & PSU
- 56K internal PCI voice/fax/modem
- Windows 98
- Vet anti-virus software

$1499

Panther

- **Intel Pentium II 350 CPU**
- 512K cache
- Gigabyte BX chipset
- 64M SDRAM
- 6.4G ultra IDE HDD
- 1.44M FDD
- 8M ATI Xpert98 AGP video
- 15" Magtron monitor
- 40X CD-ROM drive
- Creative Ensoniq sound card
- Pair of speakers
- Logitech mouse & pad
- 104 keyboard
- Choice of ATX midi-tower or desk-top case
- 56K internal PCI voice/fax/modem
- Windows 98
- Vet anti-virus software

$2099

Cheetah

- **Intel Pentium III 450 CPU**
- 512K cache
- Gigabyte BX chipset
- 128M SDRAM
- 8.4G ultra IDE HDD
- 1.44M FDD
- 16M ATI Xpert128 AGP video
- 17" Hyundai monitor
- 40X CD-ROM drive
- SB64 PCI sound card
- Genius 3D 200W speakers
- Microsoft mouse & pad
- 104 keyboard
- Choice of ATX midi-tower or desk-top case
- 56K internal PCI voice/fax/modem
- Windows 98
- Vet anti-virus software

$3025

- Free delivery & setup!*
- 2 year parts & unlimited labour warranty!
- 3 year manufacturer's on-site warranty on Magt
& Hyundai monitor!

*- Limited to Melbourne metro areas only.

Picture for illustrative purpose only. Actual units will

TECS on-site computer service

Do you have a sick computer in need of some attention? It's out of warranty and you don't know anyone you can trust? Afraid of unplugging all those cables to take the system to your nearest shop and then having to remember which plug goes where when you get it back? Why not give TECS a call? We can service most IBM compatible PC's on your premises, expertly and efficiently. We can also provide networking solutions. You know that TECS is one name you can TRUST.

Call your local TECS store for details!

TECS HOT PRODUCTS

MEMORY

8M 72pin FPM	$49
8M 72pin EDO	$35
16M 72pin FPM	$85
16M 72pin EDO	$75
32M 72pin EDO	$145
32M 100MHz SDRAM	$59
64M 100MHz SDRAM	$115
128M 100MHz SDRAM	$229

Memory for notebooks

Call for price & availability.
We can source most types.

IDE HARD DRIVES

4.3G Quantum	$215
6.4G Fujitsu	$255
6.4G Quantum	$265
8.4G Seagate	$275
10G Seagate	$339
10G IBM	$355
10G IBM 7200rpm	$439
13G Quantum	$419
16.8G IBM	$499
20.3G IBM	$679

CPU's

IBM/Cyrix 6x86-333MX	
AMD K6-2-400 3D	$89
AMD K6-2-450 3D	$299
Intel Celeron 366 PPGA	$450
Intel Celeron 400 PPGA	$169
Intel Celeron 433 PPGA	$225
Intel Celeron 466 PPGA	$335
Intel Pentium II 400	$365
Intel Pentium II 450	$429
Intel Pentium III 450	$615
Intel Pentium III 500	$630
Intel Pentium III550	$1099
	$1755

MOTHERBOARDS

Gigabyte ALI AGP AT 512K	$149
Gigabyte AX ALI ATX 512K	$159
Gigabyte LX Socket 370 AT	$165
Gigabyte LX Socket 370 ATX	$175
Gigabyte BXC ATX	$209
Gigabyte BXE ATX	$239
Gigabyte BX ATX Ultra SCSI	$539
PPGA/SEPP adapt.	$29

Upgrade Special!

Give your computer a new lease on life by upgrading!*

Offer 1:
- IBM/Cyrix 6x86-333MX CPU
- Gigabyte ALI chipset AT motherboard
- 32M SDRAM
- 4M S3 Trio 3D/2X AGP video card

$375

Offer 2:
- Intel Celeron 366MHz CPU
- Gigabyte LX chipset AT motherboard
- 64M PC100 SDRAM
- 8M Intel i740 3D AGP video card

$560

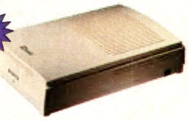
Prices include installation!

* - Subject to suitability.

Colour flatbed scanner

Specifications:
- A4 size
- Up to 30-bit true colour scanning
- Scan from 75 to 9600DPI!
- fast single pass scanning
- TWAIN compatible
* Parallel Port interface. Ideal for notebooks!

$145



Iomega ZIP drives

External parallel	$219
Internal ATAPI IDE	$159

LS-120 disk drives

Features:
- 80 times the capacity and 5 times the speed of conventional 1.44M floppy drives.
- Read / write compatible with standard 1.44M and 720K diskettes.
- Each LS-120 diskettes will hold 120M of data. Ideal for storing large download files from the internet.
- Industry standard ATAPI IDE interface.

$169

LS-120 diskettes: $19.95

ATI graphics products

RAGE XPERT128 **$335**
- 16M of memory.
- 128-bit graphics engine and memory access.
- Ideal for SOHO based PC's.

RAGE MAGNUM **$395**
- 32M of memory.
- 128-bit graphics engine and memory access.
- Hardware DVD decoder.
- Ideal for graphics pros.

$449
- 32M of memory.
- 128-bit graphics engine and memory access.
- Hardware DVD decoder.
- TV out for BIG SCREEN gaming experience.

MITAC6033 Notebook

Features:
- Genuine Intel Pentium II 333 CPU
- 64M RAM
- 6.4G hard drive
- 12.1" TFT active LCD screen
- 1.44M floppy drive
- 24X CD-ROM drive
- Carry case
- Windows 98
- SmartSuite 97
- IBM World Book 98

$3999

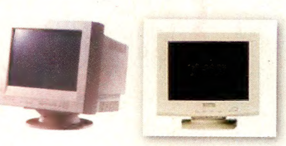
3 Year Warranty & 1 Year International Service!

Modems

Aztech V90 int. PCI	$90
Aztech V90 ext.	$115
KTX 56K ext.	$135
Banksia 56K ext.	$195
Banksia V90 ext.	$280
Netcomm 56K int. PCI	$109
Netcomm V90 ext. Ultra	$279
Netcomm V90 ext. USB	$295

Colour Monitors

3 year manufacturer's on-site warranty on all Magtron, Hyundai, Mirage & LG monitors!



14" LG 44i	$285
15" Magtron CM-15JN	$335
15" Hyundai 5854	$335
15" LG 55i	$335
15" LG 57i	$359
15" Sony 100ES	$579
17" Magtron	$589
17" Hyundai	$589
17" Sony 200ES	$1055
19" Viewmaster .26dp	$1089

USB connectivity!

USB to IEEE-1284 printer cable

Connect your existing parallel printer to the USB port! Frees up the parallel port for your ZIP drives and / or your scanners. Allows current Microsoft Windows printer drivers to print seamlessly to USB.

$65

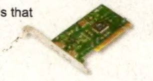
4 port USB HUB

Offers instant hot swap Plug & Play connectivity for up to 4 devices. HUBs can be cascaded to connect up to 127 devices.

$115

PCI to USB host adaptor

This adaptor provides 2 USB ports for all PCI slot motherboards that don't have a USB interface.



$59

N.B.: USB connectivity requires Win95b(OSR2) with USB supplement or Win98 operating system.

THE ELECTRONIC & COMPUTER STORES
Tecs

The Electronic & Computer Stores

Internet web address: www.tecs.com.au

Retail outlets:

City: 305 Latrobe St. Ph:(03)9602-3499 Fax:(03)9642-8551
Coburg: 311 Sydney Rd. Ph:(03)9383-7511 Fax:(03)9383-7896
Clayton: Cnr. Blackburn & Wellington Rds. Ph:(03)9562-9501 Fax:(03)9562-9261
Blackburn: 88 South Pde. Ph:(03)9877-7130 Fax:(03)9877-7382

Head office / warehouse:
Nunawading: 5 Silver Grove Ph:(03)9877-7071 Fax:(03)9877-7081

Prices and specifications subject to change without notice. E & C